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HOW TO TRADE WITH SOUTH AMERICA.

WE hope for good results from the visit, by invitation, of the delegates from leading commercial organizations in the Latin American countries who are now studying the industrial resources of the United States. It has not been long since the return of a party of our own merchants from a tour of South America, made with a view to strengthening our commercial relations with the southern republics, and the more recent international trade conference at Philadelphia bore evidence of a mutual desire for a larger trade. This exchange of visits and of views can hardly fail to acquaint both our own people and our neighbors with many points essential to an ultimate larger exchange of our products for theirs.

First of all, we hope to see our people get out of the habit of looking to the government at Washington to control their business destinies. It is time to realize that there are other considerations in commerce than of tariff changes. If commercial treaties alone could sell goods, the United States ought now to be supreme in Latin American markets, for no commercial arrangement was ever based upon terms more favorable to any country than Mr. Blaine's reciprocal system was to the United States. But our manufacturers made no effort to take advantage of it and naturally their exports did not increase. Now that this system has been abolished, its revival is impossible, because our neighbors would oppose another arrangement so one-sided in its benefits. On the whole, we are glad that it no longer exists, to keep in the minds of our people the idea of depending upon the government to open markets.

Our visitors, while having something to say about our tariff, have had a good deal more to say, and what was more to the point, on the subject of sending out our goods to the people who need them, together with the right kind of salesmen, and also on the desirability of better shipping facilities and the creation of American banks in the other republics. A fact apparently overlooked at Philadelphia is that the protection countries of Europe and free-trade Great Britain are competing in all South American markets, and their respective successes seem to have no relation to their home economic systems. Their producers have goods to sell—and they sell them.

We can appreciate the advantages that might accrue to the export trade of the United States from better shipping and banking connections with South America. But shall our manufacturers delay making a beginning in that trade until new lines of ships are running, and American banks abound south of the Rio Grande? Rates of discount at Pará and Rio and Buenos Aires are the same to Americans and Europeans alike, regardless of the nationality of the bankers, and there is no discrimination in the matter of freights against Americans. The whole truth is that if our goods can be offered on equal terms with the European, they will have an equal chance with buyers; if they can be offered for less money, they will have the preference. The way to sell goods in North America is to sell them. The same rule holds good in South America.

Let us leave our congress to the politicians.

THE BICYCLE-TIRE OUTLOOK.

THE reduction in bicycle-prices made this month at one of the most important factories doubtless will become general, having been discounted largely already. It affords no reason, however, why bicycle-tires should now sell for less money. The margin of profit on high-grade wheels has been proportionately greater than on tires, too many of which have been sold at cost or less, under the stress of unwise competition. Everybody knows that the factory cost of high-grade wheels has been less than $100, but manufacturers have calculated that the expense of selling bicycles was equal to the cost of production, and have fixed prices accordingly. This may have been true during the period of educating the public to appreciate bicycling properly, but it ought to be no longer necessary to spend money for this purpose. Bicycles ought now to be a staple article in trade, selling on their merits, with no farther guarantee than is implied in the sale of any staple article by a reputable merchant.

With first-class bicycles selling at $75 or less, with some of the irresponsible concerns now in the trade eliminated, and with the much-abused guarantee dispensed with, the sale of wheels doubtless will increase, making a greater demand than ever for tires. It will be a good thing for the rubber trade when tire guarantees are also withdrawn, and tires are sold solely on their merits.

When all these reforms are made—and they are nearer at hand than some people may think—we may expect to see more bicycles than ever, sold by substantial manufacturers and responsible dealers, at a cost within the reach of more people than now, and yet permitting a legitimate profit to be made by everybody concerned, including the makers of the tires. The best tire is sure to win, and profits are certain for the factories that succeed in giving the best value for the money.

THE EDITOR'S BOOK TABLE.

NOVA-YORK: NOTAS DE UM VIAJANTE. J. LUCIO D'AZEVEDO. Pará: Tavares Cardoso & Ca. 1897. [Paper. 3½"×6¾". 75 pp.]

NEW YORK was visited last summer by a Pará rubber merchant—Sr. Joao Lucio d'Azevedo—who enjoys at home a reputation as a *littérateur*, from the pleasing style of his contributions to the Pará press. It was natural that, being favorably impressed with what he saw in this metropolis of the new world, he should write his impressions for one of his home papers. These filled a series of letters and have been collected in a brochure which does much credit to the printer's art as known in Pará. Sr. d'Azevedo notes first the beauty of our harbor as a fitting approach to this "*cidade imperial*," and the extent of the shipping. Once within the city, he observes with interest the tall office-buildings, Wall street, Fifth avenue and the parks, the churches, the newspapers, and the appearance and the customs of the people, admiring particularly the "help-yourself" spirit of Yankeedom. His criticisms are reserved for the custom-house, which appears to him filled with corruption born of a protective tariff, and the elevated railways, which are too noisy. We trust that Sr. d'Azevedo may repeat his visit and give more New Yorkers an opportunity to make his acquaintance.

FOUND IN OUR EXCHANGES.

India-rubber Plantations. *The Electrician*, London, May 28. XXXIX, 145-146.

AN editorial article warning the ordinary capitalist to temper his zeal for investment so far as the new rubber-planting syndicates now being floated in England are concerned. The point is made that not all grades of rubber are equal to Pará, and the prices obtainable for Pará cannot be hoped for in case of African products. Intending investors are advised to obtain the opinions of experts in rubber.

On Some Repairs to the South American Company's Cable off Cape Verde in 1893 and 1895. [With Discussion.] H. Benest. *Journal* of the Institution of Electrical Engineers, London, May. XXVI, 209-256, 260-516.

THE history of this cable has been of interest for many reasons, one of which is that India-rubber was given a trial for insulating purposes in a section which is in quite deep water. The discussion, therefore, which took a very wide range, touched more than once upon the comparative merits of India-rubber and Gutta-percha for deep-sea insulation. It may be said, at least, that nothing unfavorable to India-rubber was uttered. The principal point, however, was the importance, in submarine-cable operations, of a knowledge of a nature of the bottom of the sea. When, in 1859, Mr. W. H. Preece contended before the same society that it was absurd to attempt to lay a cable without first knowing something of the nature of the bottom, he was laughed at. But so recently as 1896 a cable laid by one of the most important firms in the business has come to grief in the bed of the Amazon river, on account of a lack of just such knowledge. Mr. Benest's paper leads to the thought that much more is necessary to the successful working of a submarine cable than good insulation, or even the proper strength of conductors.

Ein Wichtiger Kautschukbaum im deutchen West Africa. [K. Schumann.] *Gummi-Zeitung*, Dresden, April 30, 1897. XI, xxx, 2-3.

REPRINT, from the "Notizblatt des Königliche botanischen Gartens und Museums zu Berlin," in relation to the *Kickxia africana*, lately discovered to be a rubber-producing species, and the rapid consequent development of rubber-gathering in Lagos.

THE issue for June 5 of *The Manufacturer*, published weekly by the Manufacturers' Club of Philadelphia, contains an extensive report of the recent international trade conference in that city, including addresses by various South American and other delegates, full of practical suggestions for those who care for the expansion of our export trade with the countries represented by them. Price 5 cents.

THE "THISTLE BRAND" RUBBERS.

IN favoring THE INDIA RUBBER WORLD with a copy of their price-lists for rubber boots and shoes, George Watkinson & Co. (Philadelphia), write: "We are sorry that we haven't an elaborately-illustrated catalogue such as the other companies issue, but we don't feel the need of one, as we are selling our goods from sample and not from pictures. Our list gives the net price to the retail trade and is about 10 per cent. higher than the prices of the first-quality brands [of other manufacturers] to that class of trade." The Watkinson goods are known as the "Thistle brand," and the object is make a high quality of goods, to sell on their merits, direct to retailers. We understand that they are running full, have lost no time since starting their factory in July, 1896, and are selling all the goods that they make. "Thistle brand" gum hip boots are listed at $3.50 net, against $3.21 by the older companies; men's short boots at $2.35, against $2.14; men's heavy overshoes at 65 cents, against 64; women's heavy overshoes at 37 cents, against 36; men's two-buckle "perfection" at $1.75, against $1.60; men's heavy buckle arctics at $1.1, against $1.07; and so on.

INDIA-RUBBER FORESTS IN MANY LANDS.

MAJOR KERBEY'S SOUTH AMERICAN TOUR.

LETTERS have reached THE INDIA RUBBER WORLD lately from Major Joseph Orton Kerbey, dated at Mollendo, Peru, whence he purposed starting overland through the rubber districts of Peru and Bolivia, expecting to reach Pará via the Amazon during September. While United States consul at Pará Major Kerbey devoted much attention to India-rubber, as a means to preparing a contribution to the volume of special consular reports on that subject issued by the government at the instigation of THE INDIA RUBBER WORLD. In his report Consul Kerbey declared his belief in the practicability of introducing the Pará rubber-tree into southern Florida, and his present mission to South America—the second since his official residence in Pará—is based primarily upon plans in that direction, though he is also looking for ethnological and other specimens for museums. Major Kerbey left New York on the *Lucania* on January 16. From England he sailed for South America, touching at Pernambuco on March 4 and later at Buenos Aires, whence he traveled by rail and on mules to the Pacific coast. On May 20 he reached Mollendo, the starting-point of a railway to Lake Titicaca, beyond which several land and water routes may be followed to as many important rubber districts.

At Buenos Aires the government expressed considerable interest in Major Kerbey's journey and offered to send him to the *gran chaco*, adjoining the Brazilian state of Matto Grosso, to report on the practicability of cultivating rubber there. He declined this, but when he left there was talk of organizing a rubber-exploitation company at Buenos Aires.

"We propose," Major Kerbey writes, "to start a nursery in south Florida, capitalized at $100,000, to propagate plants of India-rubber, cocoa, vanilla, and orchids. We want to sell plants of rubber of different sorts to companies to be formed for cultivating them in Florida, the isthmus of Tehuantepec, Central America, etc. When I get back, with 100,000 genuine rubber nuts in my possession, I know the land is ready and the money in hand to germinate them in our nursery. If you print anything about it, say that this nursery is established at Orlando, Fla., and Professor O. F. Winkleman will give information. Some rubber seed have already been sent there."

PERUVIAN SOLDIERS GATHERING RUBBER.

IN an article on the revolution last summer in the rubber district of eastern Peru, Richard Payer, writing from Iquitos,* makes a note of interest on the way in which the force of rubber-gatherers is recruited incidentally in that sparsely-settled country. Writing of the soldiers brought across the Andes from the coast districts to suppress the rebellion, Herr Payer says:

How long the troops will feel at home in this tropical climate is difficult to say; at all events it would be unprofitable for the government to transport them back over the mountains. As in the past, doubtless most of these defenders of their country who have undertaken the expedition into the unhospitable forests of eastern Peru with adventurous expectations will remain to become peaceful rubber-gatherers. They will discard their swords for rubber-paddles, and over the smoke of their camp-fires turn the milk of the rubber-tree into a merchantable product. At the present advanced prices, it requires little effort to make a rubber ball, which, at the weight of 120 kilograms, is worth 1000 francs in gold. Such a ball, while the present abundant supply of milk lasts, can be gathered by a family consisting of two or three persons in eight days; the children are especially adapted for this work on account of their agility. Thus material progress, healing all wounds, converts many an evil into good, and the rubber-men of eastern Peru will soon have regained the losses sustained through the war, the increased population enlarging the production. Rubber is, and will remain, the best paymaster, and North America, for export and import alike, affords the best market. There is a condition of solvency of the business world here which denotes that commerce is blooming anew from the ruins of the revolution.

*In *Petermann's Mitteilungen*, XLIII (1897), 43-45.

ANOTHER OUTLET FOR BOLIVIAN RUBBER.

AN enterprise under way in South America, backed by New York capital, but about which little has yet appeared in print, is thus referred to in the Panama *Star and Herald:*

According to *El Economista* (Lima), the firm of Ballivian & Co. has completed two-thirds of the road around the rapids of the river Madeira between Brazil and Bolivia, and will open the route to traffic January 1, 1897. This is only a cart-road with a total length of 112 miles, but it is of great importance. The disastrous attempt of Colonel George Earl Church to build a railroad around these rapids from San Antonio, on the Madeira, to navigable water on the river Mamoré in Bolivia, is well known. But the natural trade route into the rich regions of eastern Peru lies that way, and the desire to open it up is irrepressible. It is stated that Ballivian & Co. are backed by the Pará house of R. F. Sears & Co., whose intention is to stimulate trade by this cart-road with a view to the construction later on of a railroad, with further extensions toward Cuyaba in the Brazilian state of Matto Grosso, thus drawing the trade of that region also, which now goes down the river Paraguay to La Plata ports, in the other direction via the Amazon and Pará to United States and European markets.

The river Madeira forms the only water outlet for the republic of Bolivia, with a larger area than any European state save Russia. Into the Madeira flow streams which form a great system of waterways, draining every corner of Bolivia, and all those rivers are lined with rubber trees. It was not until 1880 that the first shipment of rubber from Bolivia was made, but in a single year recently 1,600,000 pounds of the finest rubber in the world, commanding the highest prices, have been floated down her rivers, into the Amazon, and out upon the Atlantic at Pará. This rate of progress will not seem insignificant when it is remembered that, owing to dangerous cataracts in the Madeira, scattered over a long distance, a cargo of Bolivian rubber is sometimes three months on the way to the seaboard, at a cost for transportation of 25 cents per pound, to say nothing of what is lost through the capsizing of boats. In the belief that transportation in cattle carts will be cheaper and occupy less time, the road referred to has been opened. Cattle are as plentiful in Bolivia as rubber is, and, at present, cost practically nothing. With the development of trade which is expected to follow the opening of this new outlet for rubber and cattle, the *concessionaires* believe that capital will be forthcoming for a railway to replace the cattle trail.

To-day the predominant idea in Bolivian national life is the development of the state by making her resources available, and the resource first considered invariably is rubber. The concession referred to above is held by a company headed by Sr. Adolfo Ballivian, who for some time past has controlled important contracts with the government. The interest

of Mr. Sears in the matter had its beginning a year ago or more, and he is confident of an important development in due time.

* * *

THE preceding has been in type for some time past, and is now printed without revision for the reason that the cart-road has not yet been completed. This has been retarded, THE INDIA RUBBER WORLD is informed by Mr. Sears, who is now in New York, by the fact that the laborers have been so largely utilized in gathering rubber. It is expected, however, that the road will be opened before the coming transportation season is ended. Since whatever rubber is produced hereafter on the Beni or in Bolivia will naturally come over this road, a very material saving in transportation charges is anticipated.

* * *

THE newspaper *El Economista* reports that the export of India-rubber via Villa Bella in 1895 reached 1,712,544 pounds, of which 1,545,412 pounds were "fine" and 167,132 pounds "sernamby," or coarse. The greater amount of this was the product of Brazil and the remainder of the Brazilian country drained by the Mamoré. A British consul in Bolivia, Mr. Alfred St. John, estimates the annual production of Bolivian rubber at 850 tons, provided that none is smuggled out of the country. There is an export duty of one boliviano per arroba of 25 pounds, with a duty one-half as large on coarse rubber.

AN "INIQUITOUS RUBBER TRAFFIC."

THE atrocities practiced on the native rubber gatherers of the Upper Congo, in relation to which something was published in THE INDIA RUBBER WORLD of August 10 last, seem to have been continued, according to the same authority as was quoted at that time. The Rev. E. V. Sjoblom, a missionary of the American Baptist Missionary Union (Boston), stationed at Bolengi, Upper Congo, is the authority referred to, his reports having confirmation from various sources. He reached London recently, where he said to an Associated Press reporter:

"When I left in February, matters in the Upper Congo were as bad as ever. The commission which the king of the Belgians appointed to enquire into the atrocities committed, the victims being natives, has had almost no result. The officials are indisposed to act on missionary evidence, and only a few cases of barbarity were punished. The iniquitous rubber traffic continues. When the natives are unable to obtain rubber the state troops burn the villages, murder the natives, and cut off their hands, which are afterwards smoked and sent to the state officials. Parts of the Equateurville district are in a state of open warfare."

The statements of Mr. Sjoblom were made the subject of a question in the house of commons. Congo state officials, by the way, have since denied most of Mr. Sjoblom's charges, stating that, while he is doubtless honest, his enthusiasm has led him into misstatements.

Letters received in Boston lately indicate somewhat better conditions up the Congo. The governor-general, who formerly disbelieved the charges of cruelty, was induced to make a tour of observation, when he became convinced of their truth and inclined to adopt measures for reform. A report from Ikoko reads:

"How to collect a tax from these people without force is a puzzle. I do not think that it can be done, for the greater number of them have not the slightest idea why they should obey any one unless there is some dynamical argument pressing them on. If rubber must be collected from them in certain quantities and at definite intervals, force becomes a necessity. In the adjustment of this 'force' lies the main trouble. The area is too widespread for the few white men that are in charge, and in consequence a great deal of power has been deputed to the native soldiery. They are savages, pure and simple, with all the evil rampant in them that naturally results from unlimited power of one savage over a weaker. Their training leads them to look on themselves as "killers" or "finishers," and their only delight seems to be in the exercise of their power. To collect a tax as of old by their means is certainly inhuman, but to collect the tax without them seems an impossibility. To me the only solution seems the throwing open all the country to trading companies, and greatly increasing the taxes on exports, While the state trades, and is supported in its prices by soldiers, natural and healthy competition is an impossibility."

* * *

THE North British Rubber Co., Limited (Edinburgh), are reported by a correspondent of the Colombo (Ceylon) *Observer* to be about to send out a commissioner to study the state of the India-rubber supply, to report on likely new sources, and to urge extended cultivation wherever practicable. The editor of the *Observer* adds: "We know that British manufacturers of rubber goods are getting anxious about their supplies," and recommends a revival of interest in the subject in Ceylon.

* * *

THE existence of India-rubber in the Aruwimi district of Central Africa was first brought to the knowledge of the world by Henry M. Stanley as recently as 1890, and yet in 1895 the district exported about 100 tons, while the quantity might have been doubled or trebled by slight effort.

* * *

THE *North Borneo Herald* says: "As is well known, both India-rubber (in small quantities) and Gutta-percha (largely) are produced in British North Borneo, and those products are amongst the most important of the districts which the new railway is designed to tap."

* * *

THE old story of the development of the rubber-gathering industry in the state of Maranham, Brazil, is again revived. The British consul at Pará, Mr. E. Kanthack, in reporting on the conditions of trade in Maranham, says: "One gleam of hope has appeared in the reported success of exploration for rubber; about half a ton has come to market, and is apparently of fair quality, and larger quantities are said to be on the way, while the district continues to be opened as quickly as work-people can be found to do so, and prospects are said to be most encouraging."

* * *

THE Pará Rubber Syndicate, Limited, offers a very modest program, the capital named being limited to £10,000. They enter into an agreement with J. E. Lane and R. P. Gardner, to prospect, examine, and explore any territories or places in South America or elsewhere, and to carry on the business of India-rubber planters, growers, exporters, manufacturers, and merchants.

* * *

ANOTHER new English company is the India-Rubber, Limited, with a capital of £2000, to acquire, collect, import, sell, and deal in any way with India-rubber, Gutta-percha, etc. This has no connection with the India-Rubber (Mexico) Limited, mentioned in the last INDIA RUBBER WORLD.

* * *

IN Nicaragua a bounty of ten cents is paid by the government for every tree planted, and as each acre will bear 193 trees, planted fifteen feet apart, the bounty amounts to about $20 per acre. In Mexico the bounty is less, being only three cents per tree.

INDIA-RUBBER INTERESTS IN EUROPE.

TREATING INDIA-RUBBER WITH LIQUID AIR.

PROFESSOR JAMES DEWAR has recently been making some interesting experiments on rubber at low temperatures, the temperature in fact of boiling air. "Boiling air" sounds very warm, but on the contrary it is very cold indeed, as liquid air boils when it becomes the ordinary air we know, and this boiling-point is about minus 370° F. The British representative of THE INDIA RUBBER WORLD interviewed Professor Dewar recently in London, at the Royal Institution, where he fills the chair of chemistry, once occupied by Faraday.

"My experiments on India-rubber," he said, "were undertaken in connection with experiments on metals at these low temperatures, rubber having the peculiar property of expanding at low temperatures."

"What was the nature of the experiments?"

"Well, they were, of course varied. An interesting experiment was made with a thin stretched sheet of India-rubber such as is used for making balloons. As I have just remarked, India-rubber contracts when heated and expands when cooled. Now this can be shown very easily by covering a glass funnel or the end of a wine-glass or vessel with a stretched sheet of this thin rubber. Such a surface is quite flat and fairly transparent. If a sponge of liquid air is drawn across the surface, the course is marked by a series of wrinkles due to the temporary expansion of the rubber caused by the extreme cold. The sheet of rubber, being extremely thin, soon regains an ordinary temperature, and the surface then is as flat and tense as before. During the continuous motion of the liquid-air sponge over the rubber surface, it is followed by wave-like depressions which disappear almost as quickly as they are formed."

"Does this low temperature permanently injure the rubber?"

"No; its elasticity after cooling to minus 360° F. seems unimpaired."

"In what other directions have you experimented?"

"I was fortunate in being called upon, at the opening of a new research laboratory here by the Prince of Wales, to show some of the important changes which take place in the physical characteristics of various substances which have been subjected to very low temperatures. Thus I cooled an India-rubber ball down to minus 370° F., and it became as brittle as glass, and when thrown against the wall was shattered into fragments. Whalebone lost all its spring, and lead ceased to be soft and ductile."

"What was the quality of the India-rubber?"

"That does not affect the result. Either pure rubber or heavily-compounded rubber shows this glass-like brittleness."

"Did you draw any valuable conclusions from your experiments?"

"Yes. It has been reasoned theoretically that at the absolute zero of temperature, cohesion ceases to exist, and at this low temperature we may imagine all particles reduced to a layer of dust. Experimental facts do not warrant these conclusions, however. Take the case of metals like steel, iron, copper, and brass. These had their breaking stress increased from one-third to double, its value at ordinary temperatures, while India-rubber, as you see, lost all its strength."

"These temperatures are pretty chilly, Professor!"

"We can go lower than the ones I have been talking about. If the tube holding the liquid air be still further cooled to minus 410° F., and the pressure reduced by an air-pump to about half an inch, in a short time the air solidifies to a transparent jelly-like mass, and we have frozen liquid air to work with."

BUSINESS REPORTS OF TWO COMPANIES.

THE annual report of the Hanover Rubber Comb Co. shows favorable results for the year, due to the fact that all the departments of the factory were employed to their fullest capacity during the whole time, and also to the increased demand at home and abroad for their "Excelsior" pneumatic tires. The factory capacity having reached the limits permitted by the ground space occupied, but without being sufficient to meet the growing demand for goods, the company have decided to remove the whole factory to Limmer, where they own twenty acres of land. Work is in progress on the new factory buildings, and it is hoped that by fall a part of the machinery can be transferred to them. The year's profits reached 375,360 marks, from which certain usual deductions were made for building and machinery funds, leaving net profits of 331,011 marks (=about $82,752). In consequence of a larger volume of sales, the amount of outstanding bills at the date of the report was 236,523 marks greater than at the end of the preceding year. There was an increase, too, in the value of raw material and merchandise on hand, amounting to 291,109 marks. A premium of 200,000 marks derived from the sale of new shares during the year was added to the reserve-fund, increasing it to 300,000 marks.

At the eighth regular general meeting of the Austro-American Rubber Co. (Vienna) the business report showed a net profit for the year of 213,128 florins (=about $103,367). In the distribution, after allowances for the reserve fund and for director's rervices, the sum of 165,000 florins was available for dividends, 6056 florins being carried over to the new account. The dividend amounts to 15 per cent., against 16 per cent. for the preceeding year. The capital of the company amounts to 1,100,000 florins, in shares of 200 florins each. Notice was given of the company's intention to dispose of their factory property in Vysocan, near Prague, which they acquired last year, and that the prospective buyers, a stock company in Prague, had obtained the necessary charter from the authorities. Willy Custer, of Zurich, has been made general agent of the company for Switzerland, for the sale of all their products—mechanical rubber goods, the "Continental" bicycle-tires, rubber balls, stationer's sundries, etc.

THE TIRE SITUATION IN GERMANY.

UNDER the heading "Is the Tire Business a Gold Mine?" THE INDIA RUBBER WORLD published recently an article pointing out the difficulty on the part of manufacturers of making profits on bicycle-tires at the prices quoted by some concerns in the trade. This article was quoted by our German contemporary (the *Gummi-Zeitung*), with the following comment:

"These plaints of our American colleagues are a peculiarly fitting description of our German conditions, only that the cost of the double-tube, as used in Germany, for labor, material, and general expenses is materially higher than on the other side of the ocean, where single-tube tires are used. In spite of this, the prices have reached a leved about uniform with the American, and it is only to be wondered at that tires can be made at all at such prices; and yet attempts are made to force prices still lower. If this continues the mistake must crop out, either in

the ruin of the business, or, what is more likely, in the deterioration of the product. And this is the most dangerous because it discredits the whole industry and has a depressing effect on the whole consumption of tires. May the dealers and manufacturers halt in time and use all possible means to demonstrate to the public the fact that in the purchase of tires the higher price is the cheaper, and that only at good prices good material and good workmanship can be obtained. On this basis only will the tire business remain profitable, although it never will be, and never has been, a gold mine."

TIRE COMPANY FACTS AND RUMORS.

FROM the same sources from which have emanated, for several months past, rumors regarding the absorption of the Morgan & Wright (Chicago) tire business by an English syndicate, the report now comes that "such negotiations as there were have entirely fallen through, and the option that was given for the purchase of the business has expired." This is rather belated information, in view of a statement from Fred. W. Morgan, published in December, to the effect that, after visiting England to investigate an offer made to his firm, they had "decided that it would be a sound policy for Morgan & Wright to continue business at the old stand and upon the old basis." The rumor of a "deal" has at different times taken many forms. One was that the Chicago concern was to be combined with the "clincher" tire interests of the North British Rubber Co., Limited. Another report was that a syndicate headed by Charles R. Flint was attempting an amalgamation of the manufacturing interests under the Tillinghast patents with those of Morgan & Wright—if the whole could be unloaded abroad.

Whatever else may be true, it seems certain that the English tire craze is now waning, and that the time has passed already for tempting the public to invest in new schemes by pointing to the dazzling success of the Dunlop "deal." In the case of some of the more recent attempts to float tire companies the public have scarcely subscribed anything, with the result that a great issue of shares in the hands of underwriters has become a very undesirable load to carry. Even Dunlop shares have suffered a heavy fall in price, owing in part no doubt to unprofitable investments in other companies, and the deferred shareholders are said to be no longer certain of dividends. Evidently this is not the time for English investments in American tire companies.

Dunlop interests have received a setback through the adverse decision in the French courts on the question of the validity of their patents in that country. The Dunlop company seized tires made by half a dozen French manufacturers—Michelin, Vital, and others—and brought suit against them for infringement. On account of the number of patents involved, beginning with the Thomson pneumatic-tire patent of 1845, and the volume of technicalities, the case was referred to the government patent experts, who made a report recently after an interval of two years. The finding was against the Dunlop people on every point, with the result that the French market is opened to the double-tube tires of the world. It is interesting to note that the court decided that the principle of the pneumatic tire was anticipated fully in the Thomson patent of 1845, as THE INDIA RUBBER WORLD has already pointed out might be the case whenever the tire question came to be fought in the courts. A correspondent suggests that it is too bad that the French decision was not reached before the flotation of the Cie. Française des Pneumàtiques Dunlop (originally capitalized at $140,000) in the summer of 1896 at $3,500,000, on the probable chance of the patents being upheld. Shares in the company were selling below par before the decision was reached, and there was at once a heavy further decline.

Judgment was delivered in the Irish court of appeals, at Dublin, on May 18, in the case of Dunlop *v.* MacCabe, on an appeal from a decision in behalf of the plaintiff by the vice-chancellor. MacCabe had purchased from Dunlop 2000 shares in the Pneumatic Tyre Co., on the eve of the sale of that company to Hooley, after which their value was enhanced about £10,000. Dunlop charged MacCabe with having been in the confidence of Du Cros, chairman of the Tyre company, and that they conspired to deceive him (Dunlop) regarding the value of the shares, at a time when a heavy rise was impending, due to transactions in which Du Cros was a principal actor. On losing the case—involving the payment of about £10,000 and costs, to say nothing of the stigma of having perpetrated a fraud—MacCabe's counsel took an appeal. After a hearing of several days the lord chancellor, the bench concurring, affirmed the judgment of the vice-chancelor. Counsel for MacCabe thereupon intimated an intention of appealing to the house of lords.

SOME IMPRESSIONS BY THE LATE MR. CLAPP.

BELOW is given an extract from a letter received from the late Charles M. Clapp, of Boston. It was written just before his death, and may have been the last thing that he ever wrote in relation to rubber matters. For this reason his remarks will possess an additional interest in the trade of which he was so long an important member:

"I am not up, by personal knowledge, with to-day's happenings in the rubber trade at home or abroad, but were I to go abroad now, should no doubt find things in our line much changed from what I found them when I visited every known factory in Great Britain or continental Europe, and with practiced eye looked them over and 'sized up' their opportunities and possibilities. Then the nearest to what was doing in this country was done under the control of a Mr. Bartlett (a Boston man), who was the general-manager of the North British Rubber Co., Edinburgh, Scotland. Next to him was Mr. H. P. Moorehouse, of the 'National Rubber Association,' Paris, France. The Edinburgh company was owned then by Christopher Meyer, and others, of New York city, was essentially an American company, and run by American capital and brains. . . . I found all the leading manufacturers, in Great Britain and on the continent, courteous and agreeable and ready to assist in developing all the facilities then known to the trade, and were quite different from what I expected to meet. The firm of C. Mackintosh & Co. I found quite willing to aid and alive to the possibilities, but didn't see any way to accomplish what seemed to be 'in sight,' but too far remote for them to become interested in, but times have changed and things and conditions, and I am of opinion that at present European manufacturers are disposed to listen to plans which are for increasing and developing their business."

FROM OUR BRITISH CORRESPONDENT.

IN order to successfully keep pace with the increasing demand for their goods, B. Birnbaum & Son, Limited (London), have found it necessary to remove to larger and more commodious premises, at 36 Cannon street, St. Paul's churchyard, which will enable them to keep a very much larger and better assorted stock of ladies' and gentlemen's waterproof garments.

=Mr. H. T. Hobart, manager of the European agency of the I. B. Kleinert Rubber Co. (New York), with headquarters in London, is absent on a month's vacation in the United States.

=The value of British exports of telegraph wire and apparatus for the first three months of 1897 amounted to $1,605,800, against $1,056,840 for the same period in 1896 and $498,730 in 1895.

=Mr. David S. Collins, treasurer of The Fossil Flour Co.

Bass River, N. S.), has brought across the Atlantic a quantity of refined fossil flour, specially prepared for the rubber trade, which he is trying to introduce among the manufacturers on this side the water.

=The issue is announced by the Amazon Telegraph Co., Limited, of £125,000 5-per-cent. debentures. The original capital of £250,000 has been expended, and the calculations set forth in the original prospectus may now be considered as not having been realized. The new contract with Siemens Brothers & Co., Limited, for the restitution of the cable over the disturbed 400 miles between Obidos and Itacatiara is to cost £75,000. There is to be raised, therefore, the large sum of £50,000, but for what purpose it has not been stated. The government subsidy of £17,125 per year has yet about nineteen years to run.

=The Glasgow Electric Wire and Rubber Co., Limited, has been formed to acquire the undertaking of the United Gutta-Percha and Rubber Co. (Glasgow, Scotland). The share capital is £50,000—consisting of 5000 6-per-cent. cumulative preference shares of £5, and 5000 ordinary shares of £5. Among the assets of the company are a secret process for the manufacture of what are favorably known in the trade as the "St. Andrew" golf-balls, and inventions relating to valuable improvements in machinery for covering electric wires and cables with cotton and other fibers, and for fireproof protection for insulating wires and cables. The prospectus states that the chief manufactures of the company will consist of cables and mains for electric lighting, traction, and telegraph and telephone purposes, golf-balls, and rubber tires for bicyles, motors, and carriages. It is claimed that this is the only manufactory in Scotland engaged in the manufacture of such electrical goods.

EUROPEAN MISCELLANY.

THE rubber-manufacturing firm of Broadhurst & Co., of Manchester, England, were sued recently for the return of 6*s*., which had been retained, at the rate of 1*s*. per year, from the wages of one of their employes, for the benefit of the "hospital Saturday fund." It came out in court that the firm employed 200 hands, from whom an enforced collection for the hospital fund had been made annually since 1884. Judgment was given for the plaintiff, on the ground that the law required the payment of wages in the "coin of the realm" in the absence of an agreement to the contrary, and no such agreement had been proved in this case; on the other hand, the withholding of money for a charitable fund had been done by coercion.

=The British Insulated Wire Co., Limited (London), at their sixth ordinary general meeting, in April, reported profits on the last year's business of £46,123 15*s*. 3*d*. Deducting preference dividends, interest on debentures, bad debts, and legal expenses, there remained £34,889 3*s*. 9d. A dividend of 10 per cent. on the ordinary shares was declared and £20,415 8*s*. 3*d*. was added to the reserve fund.

=Sir Elkanah Armitage & Sons, Limited (Manchester), manufacturers of cotton duck for India-rubber manufacturers, report profits for the year ending March 31, after providing for depreciation and interest on debentures, amounting to £27,409. The distribution includes £15,000 in dividends (10 per cent. for the year), and £10,000 for the reserve fund.

=The latest annual report of J. Mandelberg & Co., Limited (the Albion Waterproof Works, Manchester), showed a balance for distribution of £12,224 2*s*. 9*d*. Of this £7889 5*s*. 1*d*. was taken up with the 5½ per cent. interest on debentures and 7 per cent. dividend on preference shares; added to depreciation fund, £2446 5*s*. 9*d*.; balance to next year's account, £1188 11*s*. 11*d*.

RUBBER VEHICLE-TIRE NOTES.

THE Hartford Rubber Works Co. (Hartford, Conn.) have issued a circular denying the claim that their solid rubber carriage-tires infringe upon United States patent No. 554,675, issued to A. W. Grant, on February 18, 1896, and now owned by the Rubber Tire Wheel Co. (Springfield, Ohio.) The Hartford people announce that they have applications pending for patents covering their tire in detail, and that they will defend any suit for infringement which may be brought against any purchaser of said tire. Kelley, Maus & Co. (Chicago) have the western distributing agency of rubber vehicle-tires for the Hartford Rubber Works Co. Lockwood & Brown, manufacturers of high-grade carriage-wheels (Amesbury, Mass.), are putting on the Hartford rubber tires.

The Rubber Tire Wheel Co. (Springfield, Ohio) were prominently represented at the recent second annual exhibition of vehicles and accessories, under the auspices of the Carriage- and Wagon-Builders' Association of Philadelphia, the exhibit being in charge of F. A. Kissell, manager of the company's Philadelphia branch house. Mr. Kissell, by the way, reports a growing business, and has taken larger quarters, at No. 315 North Broad street. It is claimed that 20,000 sets of these tires are now in use. The Rubber Tire Wheel Co. have become interested in roller bearings, and have equipped in Springfield a four-story factory, 110×50 feet, with special machinery for making roller-bearing axles. This is called the "Grant" bearing, from the name of the inventor, who is the inventor also of the solid rubber carriage-tire made by the company.

Phineas Jones & Co., carriage-makers at Newark, N. J., announce that they are taking many orders for rubber tires only, for ball-bearing axles only, and for both combined. The Premier Manufacturing Co. (Hartford, Conn.) make a specialty of carriage-wheels with solid or pneumatic tires, and ball-bearing axles.

In addition to the other concerns mentioned, there are two at Springfield, Ohio, devoted to the manufacture of solid rubber carriage-tires: The Cushion Tire Wheel Co. and the Victor Rubber Tire Co.

President McKinley has purchased for the White House stables three carriages, all rubber-tired. They are a landau, which cost $1750, a brougham, $1375, and a victoria, $1275, all made to order by C. P. Kimball & Co., of Chicago. The tires were made by the Rubber Tire Wheel Co. The American ambassador to England, Mr. Hay, took with him a fine rubber-tired carriage made in New York.

A correspondent of THE INDIA RUBBER WORLD, in April, 1895, gave the result of a count of the carriages and cabs, seen on Fifth avenue, New York, on a pleasant afternoon, showing that 18 per cent. of them were rubber-tired. A similar count made recently—after an interval of just two years—showed that 73 vehicles out of every hundred were equipped with rubber tires.

Four dry-goods houses in New York have begun the use of rubber tires on their delivery-wagons. Each has ordered a few wagons so equipped, and will gradually extend the use of rubber as the steel tires on the wagons already running is worn out. A leading florist has also some rubber-tired delivery-wagons.

In the *Carriage Monthly* (Philadelphia) for April appears what is said to be the first working drawing of a low-wheel pneumatic-tired runabout that has been presented in any publication, though this type of vehicle has been on the market for over a year. The specifiations include a two-inch pneumatic tire of the hose-pipe style, metal rim, and wood rim and spokes.

THE CAUSES OF LOW PRICES FOR MACKINTOSHES.

IF the prices of mackintoshes and rubber clothing are really as low as some concerns in the trade charge their competitors with quoting this season, it is hard to see where any profits are to come in. It is an open secret that not a few concerns, during the first half of 1896, did business at a loss, from which, fortunately, some of them recovered, more or less, on account of an improved fall trade. One manufacturer, who took stock in June of last year, figuring out a loss for the season of $26,000, found after the holidays that he had made up this loss and a very small profit beside, and his case is said to be typical of a considerable share of the trade. Clearly, if prices have been any lower this year, the fewer garments sold the better for the mackintosh business. It is at least certain that no improvement in prices has been made, while there are indications pointing to the opposite condition.

In addition to the gradual decline of the rate of profits, there have been two features in the reduction of prices for waterproof clothing—the skimping of material and workmanship and the cutting of wages. There has been no fall in the cost of materials, and none is in prospect; on the other hand, as everybody knows, the tendency of India-rubber has been upward. When, therefore, a mackintosh is jobbed or retailed at one-half the prices prevailing only a few years ago, any buyer of reasonable mind must expect an article lacking in some respects as compared with what was sold to him formerly in the same line. Suppose that the same style of garment is bought, made of the same fabric, with the same waterproofing—apparently the same garment, and under the same name. Yet at half the price it will not be the same. Less material is used in the facings; the seams are simply sewn without being reinforced with a slip of material cemented on; and in other details will be found a smaller amount of work, if not a lower grade of workmanship. There are, of course, waterproof garments in the trade to-day equal to any ever sold in the past, if not superior, but the prices charged for them bear a closer relation to those of former years.

As for wages paid in the mackintosh trade, the change has not been so much in a reduction of the scale as in readjustments or the devising of economies in production, by means of which operatives claim that their earnings are lessened. Some strikes have occurred in consequence, though these have been short-lived, ending usually in compliance with the new conditions. One manufacturer, who has been in business about twelve years, has just been having some trouble with his employés, due to the first reduction in wages ever made in his shops. He explained to them that during the past year thousands of garments had been made and sold at a loss to the firm, on account of the payment of higher wages than were paid by competitors. This was done in order that the help might be kept at work, and be kept together. It was not alone through concern for the employés, for when business got better and prices improved, the firm wanted the help at the factory and did not want to be troubled with inexperienced hands. The hands have since resumed work, in the hope of profiting soon from better general conditions.

"When will improvement in the mackintosh trade begin?" a leading jobber was asked, as he showed a line of garments considerably reduced in price from last year.

"It will come only when the wearers begin to demand better garments," said he. "When people get tired of wearing these cheaply-made goods, and ask for the best that can be made, they will find that such garments cannot be produced at existing prices, and will gradually get round to paying what good mackintoshes are worth. But so long as the trade calls for low-priced goods, the manufacturer has no alternative but to make them."

A different view was taken by another gentleman, who, while not handling waterproof garments, is in close touch with the trade and the conditions affecting it.

"Any change must begin with the manufacturer," said the latter, "and not with the wearers of garments. The trouble has been that manufacturers have not had the courage to fix prices for themselves, but have allowed the trade to fix them. Whenever the average manufacturer in this line hears from one of his salesmen that somebody else is offering similar goods at less than his own price, he at once meets the cut, if he doesn't go still lower, without waiting to learn whether the competing garments are really as good as his own, or whether the competitor has really made sales. This goes on all season, so that a garment offered at $8 in September is apt to be reduced to $7 by December, and to $6 or even less by spring. Next year the standard of prices is lower, and so the pressure goes on continually.

"Now in a line so extensive and so varied as the rubber-clothing trade, there is no need for every manufacturer to be so greatly concerned about his competitors. In New York city I can point to five large jobbing-houses in the clothing trade, all handling mackintoshes, which cater to five distinctly different classes of customers. They represent an equally wide range of prices, from the highest to the lowest, though in many instances the same line of goods may be handled in two or more of the stores. This is particularly apt to be true of waterproof clothing. But it seems to me that the rubber-men, instead of being concerned about the highest standard of prices in the clothing trade, take exactly the opposite course. If one of them hears that somebody has sold to a dealer in Peck's slip, for the longshoremen's trade, a few rubber coats at $1.50, he at once marks down something better to $1.50, without regard to what might be obtained in the fashionable trade of Broadway or the Fifth avenue. Thus the lowest price paid anywhere in the United States becomes the standard in the rubber-clothing trade, just as if it were not possible for different prices to exist for the same or similar goods. There are all sorts of prices for suits and overcoats and shoes and bicycles, and why not for mackintoshes?

"Another thing I cannot understand is the great anxiety of some concerns to sell mackintoshes to big houses not legitimately in their line—to dry-goods jobbers for example. There is such a dry-goods house in New York that buys a few thousand waterproof garments every year, practically at its own price, and this means a price that yields no profit to the manufacturer. This price gets noised about and lots of people come to regard it as the standard price in the trade. The truth is that the house in question does an insignificant business in rubber goods, and the exertion which salesmen for rubber houses make to sell it a few goods without a profit—and tending to demoralize the whole trade—would be sufficient to sell a great many more goods to the legitimate trade, at paying figures.

"Still another cause of the low range of prices of mackintoshes is the strange activity of salesmen in the spring months

—a time when no jobber wants to hear about such goods, or talk about them, or think about them. But the manufacturers don't want to be idle in the summer, and their salesmen are exhorted to capture orders, by whatever means. The most that happens, however, is that prices are made that are meant to be tempting, each salesman outdoing his competitors in this respect, until the quoted prices are ridiculously low—all without forcing sales. Later, when the trade is ready to buy, these low prices have not been forgotten, and it is a difficult matter to make contracts at higher prices. Any rubber-clothing manufacture will tell you that his salesmen and the trade make his prices, and that is why the business has not been more profitable of late years. As I said before, when the leading manufacturers conclude to fix their own prices, and not till then, there will be improvement."

The mackintosh trade has seldom been so devoid of novelties as now, both in styles of garments and in fabrics for their manufacture. This is between seasons, as it were, and fall and winter styles in garments are hardly to be expected before August, while it is probable that the dealers in cloths for waterproofing will delay bringing out any novelties until October or later.

THE POSITION OF THE TIRE-FABRICS TRADE.

IT is reported in the cotton-manufacturing trade that the demand for bicycle-tire fabrics has ended earlier this season than for two years past, which would indicate a lessened activity in the production of tires. Some of the tire-manufacturers have likewise felt a sudden check in the demand from the cycle trade, in advance of the usual ending of the season. Just how many tires have been made, or how many bicycles, cannot now be estimated. There is reason to believe, however, that the output of tires for the season just closed has not been larger than in the preceding year, if, indeed, it has been so large. To begin, the manufacturers of tire-fabrics are few in comparison with the number of tire-makers, rendering it easier to review their business. One leading house estimates the total consumption of sea-island cotton in tire fabrics for the season ended July 1, 1896, at not more than 5000 bales, while the consumption this year has been slightly less. Another house in the trade reports the sale of a smaller number of yards of tire-fabrics this season than last, and also the continued failure of certain manufacturers to take fabrics from the mill which they were under contract to take so far back as January. But this slighter movement of fabrics is not conclusive proof of a smaller output of tires. In the preceding season, it is now known, the tire-manufacturers became overstocked with fabrics, so that the same number of tires might have been made this year as last, with a smaller draft upon the cotton-looms.

Any attempt to estimate the number of tires produced from the quantity of sea-island fabrics taken by the rubber trade would be in vain. No statement of the yardage of such fabrics would help on account of the great range in widths. Some tire-makers demand fabrics of a particular width—as 30½ inches—in order that the lap may occur always in a certain place, while others take the same grade in widths of 40 to 60 inches, cutting the goods without regard to where the lap may fall. Nor can anything be judged from the total weight of fabrics used, since goods of the same width vary in weight from three ounces to one pound to the yard. Finally, there are differences in the sizes of tires and in the surface measure of the fabric employed.

From the low prices at which some tires have been sold it has been inferred that a very low grade of fabrics must have been used, and such has been the case to a certain extent. Sales have been made to tire-makers of a fabric as low as 14 and 15 cents per pound, at which price only the commoner sorts of cotton duck can be manufactured, without any of the distinctive methods of weaving calculated to give strength to a tire. For instance, in the best fabrics, both the warp and the filling are crimped in the weaving, and to the same extent, so that no greater strain is placed upon the longitudinal than upon the transverse threads when the tire is inflated. But in the cheaper stuffs only the threads of the filling are crimped, placing all the strain upon one-half the threads in the fabric. Sea-island fabrics are sold by the yard, and not by the pound, but at the prevailing prices they cost at least three times as much as the figures above given.

Between the best sea-island cottons and the cheap common duck at 14 cents a pound there is a wide range in quality. First, all sea-island cotton is not of the same excellence. A cotton-trade report before the writer includes quotations for sixteen grades of sea-islands, ranging in price from 9 to 21 cents a pound, landed at New England mills. A tire-manufacturer could therefore truthfully claim to use sea-island cotton, though employing a grade only a trifle better than middling uplands, which sell for 8 cents or less per pound. Not only is there a wide range in sea-island sorts, but a certain amount of Egyptian cotton has been used in tire-fabrics, and a certain amount of mixtures of Egyptian with sea-island, sea-island with uplands, and so on.

"The use of cheap fabrics has not been as great as might be supposed," said one large weaver, "and I don't think that the practice will spread. One cannot afford to guarantee tires made of any but the best fabrics, but some rubber concerns last year tried the experiment of making an unguaranteed tire at a lower price than their standard product. I think that by this time they are convinced that it was a mistaken policy. This is a discrimination that the wheelmen cannot be expected to appreciate, since even dealers get confused by it, and the manufacturer who guarantees any part of his tire output is pretty apt to be called upon to replace everything that goes out of his factory, in a case of its collapse or failure. A factory that should guarantee none of its tires would fare no better, because guaranteeing is now the recognized custom of the trade, and cyclists will not buy twice from a house which ignores the custom. In my own opinion—and I know all the tire-manufacturers personally—at least 90 per cent. of the tires made this year and last were based on good sea-island cotton."

While the year in tire-fabrics runs from July to July, the bulk of the business is delayed usually until much later in the calendar year. There is now, therefore, too little new business under way to afford a basis for quoting prices. There is, also, nothing to indicate that prices of fabrics will be lower in the near future than in the past. When the tire trade first began to develop large proportions, and its requirements in sea-island cotton became known, the cotton trade became unduly enthusiastic over this new demand, and the largest production of sea-islands on record was the result. Lower prices likewise resulted, and a corresponding discouragement of the planters. A smaller crop was produced last year than in 1895, and that of 1897 may be smaller still, though this is yet a matter of speculation. The entire cotton manufacture has been depressed for some time

past, but there is a general hope that, before the end of this year, there will be a more general employment of spindles and such an advance in prices of products as affords the best basis of "good times"—all of which points to a firmer market for tire fabrics, if not higher prices. Another possible factor is the proposed duty of 20 per cent. on Egyptian cotton, the American use of which has become considerable. While Egyptian cotton does not compete directly with the sea-island, the market for the latter would be affected by an advance in the Egyptian, or by a falling-off in its importation. It may be that a firmer state of the market for fabrics might better enable the rubber trade to withstand the tendency toward falling prices for tires which, for some time past, has threatened their profits.

POINTS ON THE RUBBER-SHOE TRADE.

EVERYTHING points to a good volume of orders for rubber footwear this summer, an important incentive to which is the extra 5-per-cent. discount, to be withdrawn on October 1. At the same time there are dealers who have delayed detailing their orders on account of uncertainty as to the prospective styles in leather footwear. At any rate, the factories are in active operation, and the feeling prevails that this is to be a good year for the trade—provided, of course, winter brings the right sort of weather.

There appears to be an absence from the market of third-grade rubbers, which condition, it is to be hoped, will long continue. The United States Rubber Co. are not now producing the goods branded "Columbia Rubber Co.," and no important competitor is making goods of a like or cheaper grade. One explanation may be found in the fact that the reduction in prices this season brings the cost of "seconds" sufficiently low to meet most demands for lower priced rubbers than the first grade. It would be gratifying to the manufacturers, beyond doubt, to learn that dealers in rubbers had reached the conclusion that the best rubbers are the cheapest, and that their best interest lay in recommending only good rubbers to their customers. But if a demand for lower-priced goods should come again from the trade, it is inevitable that, with all the manufacturers now in the field, some means will be found for meeting it.

The production of tennis goods in the United States—applying the term generally to all kinds of canvas shoes with India-rubber soles—is estimated by a writer in the Boston *Commercial Bulletin* at 50,000 cases for the year ended April 1, 1896, and 60,000 cases for the year following. This means 1,200,000 and 1,440,000 pairs, respectively, twenty-four pairs being packed in a case. From a well-informed source within the trade—but not official—THE INDIA RUBBER WORLD is advised that these figures are probably too high, and that the sale of tennis goods by the principal manufacturer last year was about 38,000 cases. The same authority doubted whether last year's sales would be exceeded this season. A beginning has been made in the export trade, shipments of tennis goods having been made to Europe, South America, and Australia.

NAVIGATION OF THE AMAZON.

THE twenty-fifth ordinary general meeting of the shareholders of the Amazon Steam Navigation Co., Limited, was held at the Cannon Street Hotel, in London, on June 30, when a report on the company's business to December 31, 1896, was presented. An addition to the subsidized services rendered by the company has been made during the year, and the outlook for trade is more encouraging than at times in the recent past, particularly on account of the high prices ruling for rubber. The net profit for 1896 was £21,846 8*s.* 8*d.* and £4696 15*s.* 2*d.* had been carried over from 1895. In January last an *interim* dividend of 2 per cent. absorbed £10,104 15*s.* and a final dividend of 3 per cent. was declared at the recent meeting, amounting to £15,157 2*s.* 6*d.* The result is that only £1281 6*s.* 4*d.* is carried over to the account of 1897. The insurance and reserve funds remain intact at £100,000 and £75,000 respectively. The company own 3 screw steamers, 23 twin-screw steamers, 6 paddle steamers, 2 stern-wheelers, and 2 tugs—a total of 36 vessels.

REDUCED OUTPUT OF ACCRA RUBBERS.

THERE was a falling-off in the production of Accra rubbers during 1896, as compared with 1895, though the total was larger than for any preceding year. By the courtesy of the colonial secretary's office, THE INDIA RUBBER WORLD is now enabled to bring its record of rubber exports from the Gold Coast colony (west Africa) forward one year more. There will be given first a comparative statement of the exports through the Accra custom-house for five years past:

YEARS.	Pounds.	Value.
In 1892	2,663,020	$ 833,300
In 1893	3,395,990	1,090,812
In 1894	3,027,527	1,162,750
In 1895	4,022,385	1,610,350
In 1896	3,735,439	1,569,085

The values quoted above are those reported in English money, converted at $5 to £1. The next table shows the destination of rubber exports from Accra:

To—	1894.	1895.	1896.
United Kingdom	2,729,395	3,597,052	3,307,685
Germany	229,478	424,197	424,093
Belgium	.....	.....	3,661
United States	68,054	.....	.....
Lagos	.....	1,136	.....
Other African ports	600	.....	.....
Total	3,027,527	4,022,385	3,735,439

FIRE IN A VIENNA RUBBER FACTORY.

ONE of the factories of the Austro-American Rubber Co., in Vienna—that formerly operated by the Waterproof Manufacturing Co., and subsequently purchased from them—was burned down recently. The manner in which the news was reported in one of our transatlantic contemporaries affords about the oddest example of trade news that we remember to have seen. "On April 8," the paragraph runs, "a dangerous fire broke out in one of the largest rubber factories of Vienna. We do not state the name, since such announcements have proved detrimental to the unfortunate firms, in some cases orders having been diverted which the respective firms might have carried out. Our point is that the fire was noticed in the middle of the night, when everything was at rest, and when, therefore, no particular danger threatened." As nothing is said to the contrary, one might infer that the factory is still burning, and naturally, one would not care to send his orders to a concern suffering from a chronic conflagration. By the way, it would be too dreadful to think of what might have happened if the fire had been first noticed in the daytime. Our contemporary might have been forced then to mention the name of the rubber company.

IN writing your ads. for nursing-bottles remember you are trying to catch suckers.—*The Spatula.*

QUESTIONS ANSWERED BY THE EDITOR.

RUBBER-GATHERING AS A BUSINESS.

IT is my intention to engage in the rubber business, in the cultivation and the gathering of crude rubber. To this end, I would like to be put in communication with some firms who are already engaged in that line of business. My idea is to hire myself out to some good concern for a period of one to three years, and become thoroughly experienced in it. I might say that I am young, with robust constitution, and a zealous and enthusiastic worker in anything that I undertake. I name these traits of my character, as I believe they are essential for a European who undertakes to enter the fever-laden countries, where the rubber is gathered. W. S.

Chicago, June 18, 1897.

WE doubt the advisability of an unacclimated person, such as our correspondent, becoming a rubber-gatherer in any district which is now an important source of this commodity. Even the Cearense, natives of a Brazilian seacoast state, experience a very heavy mortality on going up the Amazon to gather rubber. The European laborers who have penetrated the rubber districts succumb more rapidly to the fatal fevers. There are several commercial firms in Pará, owners of extensive India-rubber reservations in the interior and of steamers used in communication with them, who employ laborers to gather rubber, which they export. Every year members of these firms go up the Amazon for a month or two, to visit their employés, but they are careful to take precautions against fever, one of which is that they live during their absence wholly on the steamers, seldom daring to sleep in the rubber-camps. Even then they do not always escape attack. The most that foreigners can hope to do, as a rule, except the natives of the warmer countries of southern Europe, is to engage in the business of handling rubber at the seaports. The situation is even worse in Central Africa. The Société Anonyme du Haut Congo have a superintendent who was previously engaged in rubber-gathering in Central America, where he became in a measure fitted for the hardships of the Congo country, but he has been obliged to leave his post at times to recuperate his health. Yet there is important work to be done in the further development of the crude-rubber business, and large rewards are possible for one who can endure the rigors of continuous life in the rubber countries. Some of the Pará firms referred to are: A. Berneaud & Co., R. J. da Cruz & Co., and Paulo Mouraille & Co. The Belgian company mentioned above can be addressed at Brussels. The most important rubber-cultivation enterprise yet under way is that of the India-rubber (Mexico), Limited, who be addressed at 17 Throgmorton avenue, E. C., London. It might be better to get a first taste of the business in Mexico, before plunging into regions nearer the equator. J. N. Garrison, at Bluefields, Nicaragua, might be written to about rubber cultivation in that country.

STATISTICS OF THE RUBBER INDUSTRY.

Can you give any tabulated statistics of the India-rubber manufacture in the United States—number of mills, number of employés, etc., or tell where such may be obtained? N.

Lambertville, N. J., June 12, 1897.

THERE is nothing of the kind in print. Such a compilation would have little accuracy without the coöperation of all the manufacturers in the way of supplying information, and there are always concerns in the trade unwilling to thus make public the details of their business. THE INDIA RUBBER WORLD of August 10, 1896, contained a synopsis of the figures relating to the rubber industry in the eleventh United States census, but those figures were for 1890, and conditions have changed greatly since then.

THE MANUFACTURE OF TOY BALLOONS.

In two or three issues of your publication in the past we have noticed inquiries as to the manufacturers of toy balloons, or rubber for the same. Occasionally this question is asked us, and we should like to know if you have ever received any information in regard to this matter, and if so, who makes them in this country.

—— CO.

Boston, June 4, 1897.

THE head of the principal rubber concern in this country making rubber toys informs THE INDIA RUBBER WORLD that, in his belief, no rubber toy balloons are made here. Such goods are particularly perishable, and are little dealt in, for which reasons no one has seemed to care to go to the trouble and expense necessary to carry on their manufacture. By the way, a letter received by THE INDIA RUBBER WORLD states that the writer is a balloon-maker and that he "might be able to assist, with formulæ or otherwise, the various parties making inquiries."

A PICTURE WANTED.

The writer wishes very much to obtain a picture of the tapping of the rubber trees in South America, or otherwise. Have you any paper with such a picture in it? F. B. H.

Boston, June 3, 1897.

MOST pictures alleged to be of rubber-tapping scenes are on the imaginative order, and probably not more accurate than our correspondent could draw at home, with his eyes shut. The best picture published appeared in THE INDIA RUBBER WORLD of June 15, 1894. It was made from a photograph showing Mr. Hermann Reimers, of New York, in the act of attacking a huge rubber tree in the forest above Pará.

NO RUBBER FACTORY IN COLOMBIA.

In THE INDIA RUBBER WORLD of August 15, 1892, you refer to a rubber-mill in Bogota, Colombia. Can you advise me whether it is in successful operation or not? G. H. K.

Naugatuck, Conn., May 12, 1897.

WE did publish on that date a paragraph stating that a factory for making rubber clothing, sundries, etc., was being put up in Bogota. It is impossible now to recall the source of the paragraph, but its publication was without doubt due to some mistake. We believe that some rubber stamps are made in Colombia, but that is the extent of the rubber-manufacture in that republic.

GROWING IMPORTS OF RUBBER SCRAP.

THE imports of India-rubber scrap into the United Stsate during the last six months of 1896 were on a larger scale than in any period in the past. This comparison shows the importation for recent fiscal years:

YEARS.	Pounds.	Value.
In 1893-94	1,774,008	$ 53,704
In 1894-95	2,032,563	63,009
In 1895-96	3,874,677	123,068
July-December, 1896	2,675,713	86,949

The average import price for the last six months was 3¼ cents per pound, which was higher than the average rate for any of the three years preceding.

RECENT TRADE PUBLICATIONS.

PRICE-LIST, 1897. PROVIDENCE RUBBER SHOE CO., UNION SHOE Co., Manufacturers India-Rubber Shoes, Providence, R. I. [Paper. 3½"×6". 36 pp.]

AUGUSTUS O. BOURN, sole proprietor, thus introduces his new catalogue: "In presenting the catalogue for 1897 to the public, I take pleasure in announcing that my factory is fully equipped with the latest improved machinery, and with all the the new styles of lasts. A personal experience of more than forty years in the manufacture of rubber shoes enables me to assure the trade that the Providence and Union rubbers are equal both in style and material to any in the market." On another page the succession of the business is shown from the partnership of [George O.] Bourn & Winslow, beginning at Providence in 1840. An entirely new feature in this catalogue is a table of measurements of lasts. "It is very necessary," says the catalogue, "for dealers to consult this list in making up their orders, as certain styles of leather goods require rubbers that are not drawn out, while others require rubbers that are drawn out a size and a half or even two sizes and a half, to fit the leather shoe." Thus men's self-acting rubbers for a No. 8 leather shoe require an 8⅛ last in wide toes and an 11⅛ last in "twentieth-century" toes. There is catalogued a full line of rubber shoes, but no boots. The illustrations are from photographs. Prices and discounts are in harmony with those of the United States Rubber Co. and the Boston Rubber Shoe Co.

PRICE-LIST AND CATALOGUE, APRIL 1, 1897. RUBBER BOOTS AND Shoes Made by The Gutta-Percha and Rubber Manufacturing Co. of Toronto, Limited. [Paper. 5"×7¼". 52 pp.]

THE appearance of their first rubber-footwear catalogue marks an additional phase of the development of this successful company which has been in progress since their establishment some eighteen years ago. Beginning with rubber belting, packing, and hose, they have added successively clothing, bicycle-tires, and boots and shoes. The addition of shoes to their list of products, instead of being due to a sudden impulse, has been in pursuance of their original plans. Consequently the preparatory steps have been taken with care, involving the erection of a considerable new building, the installation of machinery, the importation of a very capable superintendent from the United States, the choice of styles and grades, and the organization of selling facilities. They are thus enabled to come into the market with a new product with all the facilities enjoyed by the oldest factories. These goods are made in two qualities—"Maltese Cross" and "Lion" brands—and, from the appearance of the half-tone cuts shown, must be about the handsomest line of rubber footwear yet produced in the Dominion.

PRICE-LIST OF INDIA-RUBBER ELECTRIC-LIGHT WIRES AND Cables, Manufactured by Siemens Brothers & Co., Limited, London. [Paper. 6⅛"×9⅛". 20 pp.]

THIS is what its title indicates—a bare price-list of the electric-lighting wires which, while comprising a great variety, form but one of several departments of the business of the Messrs. Siemens. Here are quotations for wires insulated with vulcanized India-rubber, taped and coated with their special preservative compound, and also taped, braided, and coated with this compound; wires insulated with pure and vulcanized India-rubber, and further treated as above; two concentric, tinned copper conductors, the inner insulated with pure and vulcanized India-rubber and taped, the outer served, braided, and coated with preservative compound; wires insulated with India-rubber, taped and cased in continuous drawn lead, and so on. Dimensions are given in English and metrical terms, together with the capacity of the conductors, and the prices per statute mile. The lowest price quoted is £7 per mile, for wire weighing 20 pounds (for the conductor alone) for that length, and the highest, for a single wire, £660 per mile, the conductor weighing 6250 pounds.

CATALOGUE OF MACKINTOSHES, RUBBER AND OILED CLOTHING. Spring, 1897. St. Paul Rubber Co., St. Paul, Minn. [Paper. 3¼"×5⅜". 16 pp.]

PRICE-LIST. RUBBER BOOTS AND SHOES. SPRING, 1897. ST. PAUL Rubber Co., St. Paul, Minn. [Paper. 3⅜×6¼". 16 pp.]

THIS long-established house, doing the largest exclusively-rubber business in their section of the union, give evidence of their enterprise in seeking trade in the excellence of their advertising matter. As jobbers of rubber footwear and mackintoshes they are the northwestern agents for the American Rubber Co. (Boston), and these handsome illustrated little catalogues have been especially prepared for advertising to their customers the latest, as well as the standard, products of the "American" factories. The shoe catalogue includes also the United States Rubber Co.'s tennis goods. The company sell, also, mechanical rubber goods and druggists' sundries.

ILLUSTRATED CATALOGUE OF RUBBER MATS, MATTING, AND Treads. Boston Belting Co., Boston and New York. [Thick paper. 8⅞"×5⅞". 20 pp.]

SOME remarks on the advantages of rubber mats, which have led to their displacing, to a great extent, mats made of other materials, together with suggestions on how to order such goods and how to use them, are followed by excellent illustrations of designs in perforated mats, and prices of all the various styles made by the company named. There are also ornamental door-mats, stair-treads, etc. The catalogue is printed in colors, with embossed cover, and is one of the handsomest publications in its line yet seen. Mr. Forsyth, as usual, has had the book copyrighted.

[CATALOGUE OF] THE IMPROVED JENKINS BROS.' VALVES AND Jenkins Standard '96 Packing. 1897. Jenkins Bros., New York. [Paper. 7¾"×5". 80 pp.]

WHILE the greater part of this catalogue is devoted to metal goods, it is noticed here because the line of packing which it describes is the product of the Jenkins Rubber Works (Holyoke, Mass.)—a concern under the same ownership as that named on the title-page, and operated on a scale which indicates the importance in the market of its goods.

RAINBOW PACKING. PEERLESS RUBBER MANUFACTURING CO., New York. [Folder. 3½"×6½". 8 pp.]

AN attractive new announcement of a leading product of the company named, together with their allied goods, including description and prices.

CATALOGUES RECEIVED.

THE Singer Manufacturing Co. (New York)=The Story of the Sewing-Machine. [Paper. 6½"×7¾". 40 pp.]

Boston Rubber Shoe Co. (Boston)=Special Catalogue for Jobbers, Season 1897-98. [Paper. 8"×8". 48 pp.]

Champion Button Hole Machine Co. (Boston)=Parts, Accessories and Attachments of [their] Button Hole Machine. [Paper. 5"×6¾". 42 pp.]

Paul E. Wirt (Bloomsburg, Pa.)=The Paul E. Wirt Fountain Pen. [Paper. 6¼"×3¼". 12 pp.]

J. R. Boice (Toledo, Ohio)=The Boice Tire. [Folder. 3¼"×6¼". 6 pp.]

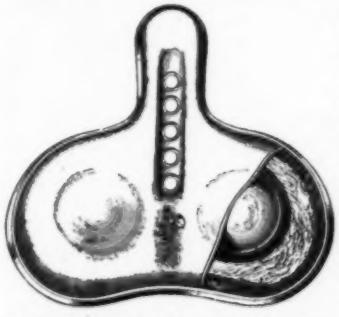
NEW GOODS AND SPECIALTIES.

RUBBER COLLARS, CUFFS, ETC.

ONE of the latest and most satisfactory articles of the kind now offered is a line of collars, cuffs, shirt fronts, etc., manufactured of rubber by the Windsor Collar and Cuff Co., Hartford, Conn. These goods are solid rubber, and while sufficiently stiff, they are still pliable, very durable, do not chip at the edges or turn yellow, as celluloid. The collars and cuffs are made in a great variety of styles, and bear a remarkable resemblance to a nicely laundered linen article, while the celluloid article deceives nobody. They may be cleaned by rubbing with a damp cloth, using sapolio or powdered pumice stone.

THE "BEDFORD" SADDLE.

THIS is a semi-pneumatic ball-bearing bicycle saddle, so constructed that it will maintain its shape independent of the pneumatic pads employed. The pneumatic pads or balls are encased in felt, and are independent of the main structure of the saddle and may be removed and replaced in a simple, inexpensive, and expeditious manner. Metallic cups or sockets are provided for the pads, enabling them to have more or less vertical play under pressure. Provision has also been made for a support for the covering of the saddle at the margin of the frame whereby the saddle may be prevented from breaking down, especially at the pommel and where it connects with the body of the saddle, a fault existing in so many saddles. You can inflate the rubber balls and have the saddle soft or hard as you like, the air being confined in a very small space; the saddle is firm and always retains its form. The anatomical properties of this saddle are said to be perfect—the points of the pelvic bones rest directly upon the rubber balls and no injury can result to the spinal column or to any of the sensitive parts—as with a hard saddle. Wm. B. Riley & Co., manufacturers, 324 and 326 Market street, Philadelphia, Pa.



THE "COMFORT" GARTER.

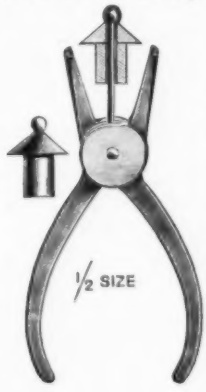
THE Comfort garter, shown in the illustration, is designed especially for bicycle riders and golfers, and by reason of its peculiar construction it holds the stocking up without any undue tension on the leg. It is provided on its inner surface with a rubber lining, having soft rubber teeth or projections which enter into and engage the meshes of the fabric of the stocking. As the tension of the garter is no greater than is required to hold it in place, the pressure is not sufficient to produce any discomfort or inconvenience, and it does not, therefore, interfere with the circulation of the blood, while at the same time does not allow the stocking to creep down. Manufactured for both ladies' and gentlemen's wear by Dreyfus & Waterman, 52 Lispenard street, New York.

PNEUMATIC BATHING CORSET.

SEVERAL attempts have been made at a kind of life preserver to be used by bathers who are not expert swimmers, but one serious objection to all of these devices heretofore has been their unsightliness, and it required a person of considerable "nerve" to wear one. The bathing corset, manufactured by the Pneumatic Vest and Corset Co., 8 West 14th street, New York, is a kind of inflated corset, to be worn beneath the bathing suit, unknown to anyone else than the wearer. The corset contains air enough to more than support the body in the water without any effort on the part of the person wearing it. The garment is made without stays or steels, and is not damaged by either salt or fresh water. In the illustration the corset is shown over the bathing suit, although in practice it is intended to be worn beneath it. The same idea is worked up into a bathing vest for men's use.

THE "GREAT SCOTT" REPAIR OUTFIT.

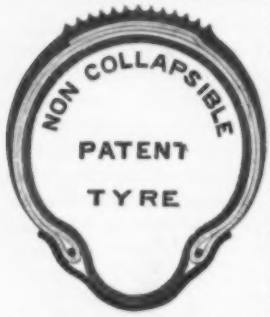
NOTWITHSTANDING there are some who prefer the use of a thick cement for repairing punctures in single-tube tires, the fact is that a very large percentage of riders much prefer the plug for large punctures, and if they are well put in the repair is perfect. Among the devices designed for the insertion of rubber plugs into punctured tires is the Great Scott Repair Tool, manufactured by the Mechanical Fabric Co., Providence, R. I. It will be seen from the illustration that this tool does not leave too much to the skill of the operator, but that a satisfactory repair can be made by the most inexperienced within a very short time. The price of this repair tool is 50 cents.



A NON-COLLAPSIBLE TIRE.

IN England, as in this country, there is a class of bicycle riders who demand a "puncture-proof" tire,—one of those tires which can be ridden over all kinds of rough roads with the assurance that the rider won't be subjected to the experience of having his "bloomin' bellus busted twenty miles from 'ome!" The Non-Collapsible Tyre Co., Ltd., (Midland Rubber

Works) Birmingham, England, maintain that there is no such thing as a puncture-proof tire, and the person who believes otherwise is a dotard; but they are manufacturing a tire from which the air cannot escape when an incision has been made in it, and the cyclist who runs on to some sharp object with their tire will continue his pedalling in blissful ignorance that his tire has been punctured. A cros-ssection of this Non-Collapsible tire is here shown. The manufacturers claim that the method of attaining the peculiar property of this tire is a secret, but they volunteer the information that they have solutioned a strip of India-rubber in which is incorporated by a patent process a thin layer of silk, and it is claimed that this combination has the peculiarity of immediately hermetically sealing up any puncture or cut that may be sustained by the inner tube, thus preventing the air from escaping. This tire is of the wired-on variety, but the method of attachment is simple, and the inner tube can be taken out and replaced without the use of any tool. The intending tire purchaser is not asked to meekly take the manufacturers' word for such novel claims, but he is invited to call upon their nearest agent with an assortment of forks and nails and the agent will have great pleasure in allowing him to prove for himself their contention as to its non-collapsible property, and then he will have greater pleasure in booking an order after the skeptic is satisfied with the result.



RUBBER SPONGE BATH-BRUSH.

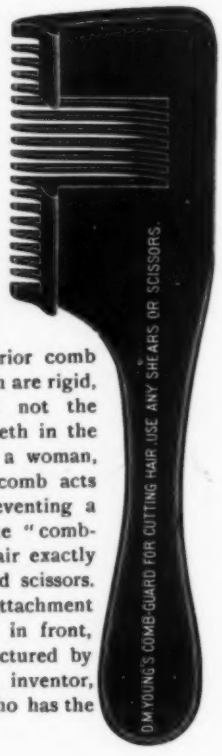
ONE of the modern luxuries of the bath which owes its existence to India-rubber is the rubber sponge bath-brush, manufactured by McCafferty & Holton, 163 William street, New York. The cut gives a very good idea of the general appearance of the article, which is made of brown sponge rubber, with a solid rubber corrugated face, and it is claimed by the makers to be unrivalled by bristle as a cleansing medium, for exciting lively circulation of the blood, and for keeping the cuticle in a healthy condition. The brush may be used in either hot or cold water without injuring it in any way.

NELSON SAFETY DETACHABLE CLIP.

A toe-clip designed on novel lines and involving the use of rubber has lately been placed in the market by the A. H. Pierce Mfg. Co., Kinzie and Green streets, Chicago. The clip is the invention of Charles A. Nelson, and is sold under the name of the Nelson Safety Detachable toe-clip. It consists of a plate for the support of the foot, affording a bridge across the side-plates and presenting an unyielding surface to the seating of the ball of the foot, making it impossible for the ball to be forced down between the plates—a common occurrence when thin-soled shoes are worn. From this plate are stampted up two spring lugs which grasp the shaft-cover of the pedal and firmly affix the clip to the pedal without the use of any other clamping device. The clip is covered with corrugated rubber, strengthened by two thicknesses of fabric, which affords a non-slipping surface for the sole of the shoe. Although the clip is readily detachable, the lugs are so shaped that they hold against a considerable effort, requiring a pronounced pull upward to detach the clip from the shaft-cover. This follows naturally and automatically in the case of a sudden fall, either from side-slipping or other causes. The clips are furnished in various lengths to fit shoes of different sizes. A commendable feature of this clip is that it will fit either a rubber or a rat-trap pedal of any width

A NEW COMB.

THE general public has for many years been using combs of all sizes, but the shapes and styles vary but little. Here, however, is the cut of a comb which is entirely novel as to shape and the use for which it is intended. The inventor of this comb thought on the problem of a device for hair cutting in families on farm and in town. This peculiar looking comb is the result. With it a mother can cut her growing boy's hair evenly, easily, or that of her husband. She can also use it for combing her own hair, and the inventor claims it is a superior comb for that purpose. The short teeth are rigid, and cuts the dandruff as does not the ordinary comb. Then the long teeth in the slot penetrate the thick hair of a woman, combing it out straight. The comb acts as a guard for the scissors, preventing a false cut, and hence its name, the "comb-guard." In using it one cuts hair exactly as does a barber with comb and scissors. With the comb-guard goes an attachment enabling one to cut hair long in front, etc. The comb guard is manufactured by the India-rubber Comb Co. for the inventor, D. M. Young, of Newburgh, N. Y., who has the monopoly of its sale.



"DOWNIE" PNEUMATIC-TIRE PROTECTOR.

THE Skinner Hardware Company, Pomeroy, Ohio, are marketing a pneumatic tire protector known as the Downie. The protector consists of a circular strip of fabric 3 inches wide. Through the center and on the outside runs a strip of rubber 1½ inches wide tapering at the edges. This is vulcanized into the fabric, the edges of which have a vulcanized hem through which passes a wire cord so fastened as to form a circle slightly smaller than the protector so that it will draw down on the side when the tire is inflated. To put on the protector the tire is deflated when one of the forks is loosened and the device slipped over the tire, care being taken to get it in the cen-

ter. The tire is then pumped up for use. This is not offered as absolutely puncture proof, but it is claimed that by using this appliance punctures will be infrequent, and that the tire will never give out from actual wear. When not in use it can be removed and put in the pocket. It weighs 10 ounces to the pair.

THE "SPIRAL RIB" NIPPLE.

A RECENT form of the non-collapsible nipple, of which there have been many designs brought out of late, is shown by the cut produced herewith. The peculiarity which gives this nipple its name is a continuous spiral rib of rubber raised on the inner side of the nipple, extending through its body, giving additional elasticity, while at the same time preventing collapsing. The illustration is of the interior of the nipple. From the outside it presents the same general appearance as a common nipple. Manufactured by the Michael Manufacturing Co., 102 Fulton street, New York.

"GOODRICH" GOLF-BALLS.

THE ancient and royal game of golf having become, by adoption, so thoroughly American, it was only to be expected that all the appliances for the sport should speedily be produced by American manufacturers. In this connection mention must be made of the "Goodrich" golf-balls, which, as we understand are made of the finest Gutta-percha, are thoroughly seasoned, and are painted with material imported from England. They

are packed in handsome wooden boxes, a dozen to the box, and sold direct to the trade. It is particularly to be noted that these balls are stamped with the date when they were made, and also with the date of painting them. They have been tried by expert players and professionals, and have been highly recommended. Manufactured by The B. F. Goodrich Co., of the Akron Rubber Works, Akron, Ohio.

THE EAGLE "GOLF" PENCIL.

IN stationer's rubber goods, as in every other line of trade, it is found necessary all the while to bring out novelties, in order to stimulate trade and to prevent competitors from getting more than their share of the business. The cut herewith represents a lately-patented pencil, made by a prominent firm who make it a point, at least once in each year, to bring out something new involving the use of rubber. The eraser, which is in the shape of a golf-ball, is so firmly imbedded in the tip that it can be used effectively and with the best results. A high grade of pencils is offered in this style. Manufactured by the Eagle Pencil Co., Nos. 377–379 Broadway, New York.

"GOLD MEDAL" FOLDING BATH-TUB.

THE cover of this portable bath-tub consists of very heavy, closely-woven cotton duck, coated with India-rubber, and then vulcanized. The result is a smooth surface, easily cleaned, and

not liable to injury from soap, salt, sulphur, or medicated waters. A single piece of duck is used for each bath-tub, so as to avoid seams as far as possible, and the manufacturers, after an experience of nearly a year, have found the rubbered surface free from any tendency to crock. The frame is of hard wood—rock elm, generally—and the construction involves the use of patented metal joints, by means of which the bath-tub folds easily and compactly. The frame is so constructed as to stand firmly on the floor, no matter whether the tub is empty or filled. The shape is well shown in the cut. At the top it is about 5 feet long by 27 inches wide; it is about 16 inches deep and 12 inches wide in the bottom. When folded these tubs are 5 feet long by 5 inches square, and weigh 16 pounds. For children a smaller size is made, suspended at a convenient distance from the floor. The retail price is $10 for the adult size and $5 for children's. An export trade in these goods has been begun, extending already to Mexico, Australia, and South Africa. Manufactured by the Gold Medal Camp Furniture and Novelty Manufacturing Co., Racine, Wis. The excellent quality of rubber duck used by this firm is specially prepared for them by the Chicago Rubber Clothing Co., of the same town.

AN IMPROVEMENT IN RUBBER SHOES.

A NEW feature in rubber footwear, first introduced this season by George Watkinson & Co., Philadelphia, is described as the "Serpentine Elastic Stay," the purpose of which is to prevent cracking at the sides near the sole. It appears to be a simple remedy which overcomes a long standing defect in rubber overshoes. It is described, in the language of a patent granted in March last to Joseph M. King, of Brooklyn, as "the combination with the outsole, the insole, the upper and the upper-lining, of a reinforcing-strip which runs continuously along the sides of the shoe or boot and around the toe thereof from one side of the counter to the other, between the outsole and the insole and between the upper and its lining, the said strip having a sinuous or irregular upper edge and being united from edge to edge by cementing and vulcanizing with the said parts between which it is interposed."

BRIEF ABSTRACTS OF RECENT RUBBER PATENTS.

IN chronicling the appropriate patents embraced in the issue for the month now in review, the aim has been to set forth the nature of the various inventions to an extent sufficient to form the basis of a judgment as to whether or not a particular patent should be more carefully looked into.

TIRES.

No. 581,945.—Implement for Repairing Pneumatic Tires. Ernest Scott, Providence, R. I., assignor to the Mechanical Fabric Co., same place.

Comprises a pair of pivoted holding jaws and an intermediate forcing tongue adapted to enter the cavity of the repairing-patch stem.

No. 581,962.—Inner Tube for Pneumatic Tires. George C. Moore, Providence, R. I.

A strip of rubber or other appropriate material bent twice upon itself and the ends brought back and united, the edge portions of the strip being joined together along the sides of the tube.

No. 582,143.—Tool for Repairing Pneumatic Tires. Frank H. Mayer, Denver, Colo.

Consists of a compressible cement receptacle with a tubular outlet, a lengthwise movable needle shank in the outlet having a bulb-like needle point at its outer end and a valve-plate at its inner end, and a cap or cover for the needle point.

No. 582,172.—Tire for Bicycles. Charles F. Browne, Westfield, Mass.

A structure embracing an inflating tube, and a series of bags, each having a valve with their upper ends curved and adapted to bear against the inner upper surfaces of the bags, whereby when one of the series of bags is punctured the adjacent bags expand and close the valve of the punctured bag and thus prevent the leakage of air.

No. 582,194.—Pneumatic Tire. Thomas Furlong, St. Louis, Mo.

An ordinary pneumatic tire provided with a thick, flattened tread formed with a closely associated series of indentations or pockets.

No. 582,356.—Bicycle-Tire. Albert J. Keck, St. Paul, Minn.

An elastic ribbon is wound around and around a channeled wheel rim stretching across the channel therein, and in contact with the ribbon where stretched across the channel there is an endless flexible tire.

No. 582,374.—Apparatus for Patching Pneumatic Tires. John F. Rau, Chicago Ill., assignor, by mesne assignments to the Morgan and Wright Co., same place.

Covers a device for applying cement and a patch to the neighborhood of a puncture in a tire having an opening, and consists of an absorbent pad having a handle sufficiently long to reach the puncture from the opening, a removable cover for the pad also having a handle, and a holder for the patch.

No. 582,483.—Cushion-Tire for Wheels. Luther H. Carr, Canton, Ohio.

A wheel rim formed with two circumferential grooves or channels is fitted with a tire, parts of which contiguous to the grooves in the rim are forced thereinto by tightening bands located in a continuous opening or chamber in the tire.

No. 582,511.—Pneumatic Tire. Henry C. Williams, Trenton, N. J.

Directed to construction of tread portion wherein a longitudinal rib along the crown of the tread is crossed by a series of parallel, diagonally-disposed ribs extending on both sides of the longitudinal rib and tapering from thence outward.

No. 582,583.—Pneumatic Tire. Thomas Dunn, London, Eng.

Comprises an inner air-tube, an outer tubular covering and a circular metal strip arranged, centrally at the inner circumference of the tire between the outer covering and the air tube so as to press the former upon the wheel rim along two circumferential lines when the tire is inflated, the ends of the metal strip being free to expand or contract during inflation and deflation of the tire, and coöperating with means for keeping the ends in place after inflation.

No. 582,830.—Pneumatic Tire. John Fearson, Levenshulme, England, assignor of two-thirds to John Bennett Price, Chorlton-Cum-Hardy, and Edward Turner Whitelow, Manchester, England.

A repairing sleeve or ring, adapted to grip the air tube of the tire from the first moment of inflation, like a ligature, and expand therewith, but being movable to the place of a puncture.

No. 583,124.—Wheel for Bicycles. Frederick A. Redmon, San Francisco, Cal.

Above two laterally-yielding rims at the ends of crossed wire spokes there are connected together the wings or flanges of an elastic tire.

No. 583,145.—Pneumatic Tire Armor. Allison N. Free and Alfred Free, Milwaukee, Wis.

Arc-shaped scales are vulcanized, or otherwise secured in the tire tread, so that the outer surfaces of the scales are flush with each other, this being effected by seating alternate scales in the depressed edges of adjacent scales.

No. 583,270.—Tire for Bicycles. Elias D. Strong, Chicago, Ill., assignor, by direct and mesne assignments, to Anton C. Eggers, Brooklyn, N. Y.

The inventor forms a tire by uniting the ends of a strip of suitable material to form a band or belt and then rolling it up in the form of a tube on its circular axis, made up of one or more layers spirally arranged.

No. 583,280.—Pneumatic Tire. Mark L. Deering, Brooklyn, N. Y.

A double tube tire, both tubes being inflatable, the opening in the outer tube for the passage in or out of the inner-tube being through an expansible aperture in a diaphragm backed by a sustaining part and means being provided for hermetically clamping the valve post of the inner tube protruding through the expansible aperture to the edges of the same.

No. 583,362.—Elastic Wheel Tire. Edward E. Dulier, Mildenhall, England.

Embraces a continuous caoutchouc band secured to the tire from which project integral studs through and beyond orifices in a continuous metallic ring.

No. 583,428.—Apparatus for Manufacturing Pneumatic Tires. Robert Cowen, Cambridge, Mass., assignor to the Boston Woven Hose and Rubber Company, Boston, Mass.

Covers a vulcanizing-mold made up of two substantially rigid inner members adapted to retain a flexible outer member and thereby inclose the tube to be vulcanized, the two inner members having substantially the same width, and being formed to constitute between them an annular selvage-receiving chamber with opposite entrances between the overlying adjacent edges of the two members, and the outer member having enlarged selvage edges to enter the opposite entrances of the selvage-receiving chamber and be securely held within the chamber, and means carried by one of the inner members to clamp the two together.

No. 583,436.—Repair-plug for Flexible Tubing; 583,437—Valve Stem for Pneumatic Tire Tubes; 583,438.—Bicycle Repair Plug and Means for Inserting Same. James L. Hatch, Milford, Mass., assignor by mesne assignments, to Charles H. Phinney, Brookine, Mass.

The first two patents cover the one a repair plug and the other a valve-stem whose external surfaces are corrugated. The latter patent extends to a longitudinally-perforated, headless plug, which, after insertion, is secured to the tire and the perforation closed by cement passed through the perforation.

MECHANICAL GOODS.

No. 581,785.—Lawn Sprinkler. Joseph H. Smith, Washington, D. C.

The water pipe opens into a stationary head having inner

and outer concentric flanges with cut-aways forming water inlet and outlet openings, and a circular passage way, and, inclosing the stationary head, is a rotary head carrying pivoted blades designed to be alternately lowered into the passage-way.

No. 581,874.—Regulating Sprayer or Sprinkler. Ra'eigh P. White, Kansas City, Mo., assignor to James K. Thompson, same place.

Adjustably inserted in the upper end of a quadrant shaped pipe is a conical valve having a longitudinal channel, the hose being attached to the lower end of the pipe which is kept in position by an appropriate shoe.

No. 581,876.—Lawn-Sprinkler. Herbert L. Aulls, Denver, Colo.

A rod forming a base is bent around the horizontal portion of the conduit on both sides of the vertical portion, and the encircling portions of the rod may be fixedly secured to the horizontal portion of the conduit by nuts, which if loosened permit the vertical portion to be turned down parallel with the plane of the base.

No. 582,017.—Lawn or Garden Sprinkler Homer Hoch, Marion. Kans.

Upon a table or support is pivotally mounted a plate to which may be temporarily secured a hose nozzle, while in front of this pivoted plate there is arranged a water wheel secured to a shaft and driven by the jet issuing from the nozzle, the shaft carrying a worm meshing witha worm wheel connected by a link with the pivoted plate.

No. 582,061.—Spray-Nozzle. Philipp Feurbringer, Ellenville, N. Y.

Into a tapering outer shell or tube, threaded at the larger end for attachment to a hose, there is inserted a central tube of uniform diameter having radial wings in close contact with the bore of the outer tube, and at its outer end an integral deflector which coöperates with the flaring mouth of a screw-threaded sleeve, adjustable upon the outer end of the outer shell or tube.

No. 582,125.—Spraying Attachment for Hose-Nozzles. Albert L. Hatch, Grand Rapids, Mich.

Covers a sprayer for temporary connection to a hose-nozzle and consisting of a plate, the sides of which adjacent to one end are folded toward each other to form a seat for the hose-nozzle which is laid therein and held by a spring, while the other end of the plate is bent upward at an angle to deflect the jet, a support in the form of an inverted U-shaped piece being stiffly hinged to the under side of the plate for holding the attachment and nozzle adjustably at an elevation.

No. 582,251.—Globe-Nozzle. Don B. Adams, Chicago, Ill., assignor, by direct and mesne assignments, to the Globe Nozzle Company, Charleston, W. V.

The pipe terminal has an approximately spherical end made in sections and provided with a discharge-exit, over which fits an approximately hemispherical cap provided with several perforations and movable about the spherical end to cause any desired perforation to register with the pipe passage, a perforated packing being located in the spherical end and closing the joint between the pipe terminal and the cap in every situation of the latter and also closing the joint between the end sections.

No. 582,345.—Hose-Nozzle. Felix L. Decarie, Montreal, Canada.

A valve-casing is provided at diametrically opposite points with a nozzle extending outwardly, and a tube, forming the continuation of a nipple, extending into the casing and toward the opposite wall of a hollow plug valve therein, the wall of the plug through which it extends being cut away sufficiently to permit a rotary movement of the plug to bring any one of a number of openings in the plug in line with the tube and the nozzle and an operating handle projecting outward through a screw cap on the casing.

No. 582,397.—Circular-Spread and Center-Jet Nozzle for Hose. John Shone, Chester, England.

In this structure the size of both the inner center-jet and the outer annular openings are adjustable, these results being accomplished by adjustably connecting with the exterior of one end of the body portion a part with a flared mouth, which mouth coöperates with the flared end of an inner jet-tube, while a longitudinally movable valve may be operated to enter and close the inner end of the jet-tube by a movable sleeve upon the body portion.

No. 583,135.—Hose-Nozzle. Henry F. Wilson, Chicago, Ill., assignor to the Crane Company, same place.

Effects an adjustment in the size of the annular discharge opening by rotatably connecting with the body portion, a sleeve provided with a discharge orifice, a hollow spindle, movable lengthwise through the sleeve and body portion, but not rotarily therein being engaged by screw threads with the sleeve, and being provided at its outer end with a conical enlargement adapted to seat against the face of the discharge orifice.

BOOTS AND SHOES.

No. 582,082.—Rubber Overshoe. John F. O'Brien, Montreal, Canada, assignor of one-half to James Cooper, same place.

The forward sole-rim is provided with a metal strip located between the lining and cover of the rim and extending transversely of the shank of the shoe as well as along the entire sole-rim.

No. 582,176.—Rubber-Holder. Henry B. Crampton, Syracuse, N. Y.

The body of the holder is provided with prongs for securing it to a rubber, and a loop in which a loose spring finger may be adjusted to engage with the front only of the heel of a shoe in the rubber when it may be locked by a dog on the body of the holder.

No. 582,670.—Insole. James E. McWilliam, Hubbardston, Mass.

The insole is made up of three layers, first, a rubber backing, then cotton-cloth layers vulcanized onto the backing, and finally an upper layer of textile fabric having weft or filling threads, each comprising a cotton core, with wool loosely twisted around the same, the wool being brushed or combed out onto the upper surface of the fabric.

ELECTRIC CABLES.

No. 581,715.—Electric Cable. Max Guilleaume, Mulheim-on-the-Rhine, Germany.

Within an outer protective covering of hemp, jute, etc., is an inner, soft pressing of India-rubber or similar material applied in a plastic state to a bundle of conductors each enclosed within an insulating envelope which is so far as possible out of contact with and unsupported by the conductor, whereby an air space is maintained between the conductor and the surrounding insulating material.

MISCELLANEOUS.

No. 580,406.—Diaper. Isaac B. Kleinert, New York City.

As an improved article of manufacture, the seamless diaper-trousers, consisting of an inner and outer cloth facing united by waterproof material between them forming a body and leg portions, the former having a front flap and the inverted-V-shaped crotch made integral therewith, and the latter comprising the inside flaps, the outside flaps, and suitable fastening devices connecting the flaps.

No. 580,515.—Roof-Flange.—Henry C. Wedeen, Quincy, Mass.

A roof-flange formed wholly of India-rubber and consisting of a flexible base, a self expanding and contracting cylindrical portion, and an intermediate tapering portion.

No. 580,591.—Phonograph or Talking-Machine. Edward H. Amet, Waukegan, Ill.

In a talking-machine the combination with a recording point or stylus, of a diaphragm, clamp-rings for supporting the diaphragm, a thin soft-rubber covering for the diaphragm, a speaking tube leading to the diaphragm, and a vent opening or tube leading into the speaking tube near the diaphragm.

No. 580,689.—Protective Bushing and Holder for Rubber Gas-Bags. John Hearne and Elmer E. Cisco, Brooklyn, N. Y.

A protective bushing and holder for gas-bags comprising a tubular bushing having its lower portion provided with an exterior screw-thread adapted to screw into an opening in a gas main or pipe, the lower portion of the bushing having a length slightly greater than the thickness of the main or pipe, the lower end at the inner side being rounded, a cap adapted to screw onto the upper portion of the bushing and having an aperture through its top and a valve for closing the aperture.

No. 580,982.—Print-Mounting Roller. James F. Marsters, Brooklyn, N. Y.

In a print-mounting roller, the combination of the central core consisting of a hollow metal tube provided with threaded ends; a covering of rubber mounted thereon; caps having rounded ends with a central opening therein screwed upon the threaded ends and permanently secured thereto by indenting the parts; and a handle formed of a single piece of wire, the ends of which stand in line with the axis of the core and pass through the openings in the caps, the ends of the handle being headed.

No. 581,042.—Pneumatic Horse-Boot. Robert Sites, Homer, Ill.

A bandage composed of an outer covering of stiff non-stretchable material of oblong rectangular shape, a lining of soft material stitched at or near its edges to the outer covering and having a projecting edge portion to provide an under lap to the edges of the bandage when applied, an inflatable sack interposed between the covering and lining and adapted when inflated to be confined between the covering and lining to cause the latter to conform to and bear with equal pressure against all parts of the member confined within the bandage, a valve-stem communicating with the inflatable sack and projecting through the covering, a parallel reinforcement secured to the covering, a series of binding-straps secured to one edge of the bandage, and buckles attached to short straps stitched upon the outside of the bandage some distance inside the opposite outer edge, and a reinforcing-strip attached in rear of the buckle, the bandage designed for application to a defective or injured arm or limb.

No. 581,095.—Rubber Attachment for Pedals. Frank J. Willard, Sacramento, Cal.

A rubber attachment for pedals, consisting of a pair of frames, each frame being provided with a laterally-projecting flange on one edge adapting it to be adjusted to the edges of the pedal, rubber pieces having their bases fitted into and clamped by the frames, and a spring-piece connecting the sides of the frames opposite to those upon which the flanges are formed, whereby the frames may be readily fitted to the pedal and held in place.

No. 581,107.—Combination Tire-Inflating Pump and Bicycle-Supporter. John Emery, Brunswick, Victoria.

As an article of manufacture an inflating-pump, securing prongs or projections formed on the handle of its piston, a set-screw attached to the cylinder of the pump to fix the piston at different positions of adjustment, a cover for the inflating end of the pump, and a suitable device connected thereto for attachment to a bicycle.

No. 581,319.—Substitute for Vulcanite, Hard Woods, etc., and Process of Manufacturing Same. Pieter W. Wierdsma, Schrans, and Johannes Kuipers, Leeuwarden, Netherlands, assignors to the Kuma Limited, London, England.

The process of forming a substance from the refuse remaining after the manufacture of potato-flour, which consists in mixing the refuse with water, passing it through a sieve, washing, bleaching, and drying it, adding a suitable water-proofing material such as pitch, gum, varnish, or the like, then grinding it into powder, sifting it, and molding it dry by great pressure.

No. 581,402.—Ink-Fountain. Jacob E. Bartel, Astoria, Oregon.

An improved article of manufacture, an ink-fountain formed entirely of rubber or like yielding material, and consisting of a body having its upper portion flaring and its lower portion reduced and extended, forming a neck, a stout funnel-shaped plunger, having its upper end of larger diameter than the lower extremity of the neck and having the latter extending therein, and an elastic envelope surrounding the neck and forming a space thereabout, and cemented at its lower end to the upper edge portion of the plunger and at its upper end to the lower portion of the body above the neck.

No. 581,525.—Hand Printing Device. Richard H. Smith and Willard F. Tripp, Springfield, Mass.

The combination in a hand printing device, of a beam provided with a longitudinal dovetail groove, a presser-foot formed with a tongue to enter and slide in the groove, the tongue being recessed, and a rubber face on the presser-foot and rubber integral therewith in the recess in the tongue and a suitable type-guide.

No. 582,045.—Dental Plate. William S. Depew, Jamestown, N. Y., assignor to Milo Harris, same place.

A lining for dental plates composed of metal, vulcanite rubber and a fluid or fluids to cut the rubber, the lining being vulcanized with the main body of the vulcanite rubber.

No. 582,046.—Metal Paint. William S. Depew, Jamestown, N. Y., assignor to Milo Harris, same place.

The paint is composed of vulcanite rubber, aluminum and chloroform in such quantities that when the same is mixed and applied to rubber the whole may be vulcanized and form a solid body.

No. 583,209.—Pneumatic Saddle for Cycles. Andrew Cleland, Toronto Canada.

Side pneumatic cushions and rear cushions on the same level are formed on the saddle, while centrally there is a depression from the rear end of which extend, obliquely, inclined depressions merging into the top of the saddle.

No. 583,307.—Dental Rubber. Isaac B. Kleinert, New York, N. Y.

Consists of a sheet of vulcanizable rubber comprising two layers, one imitating the color of the gums and the other of tougher material.

TRADE-MARKS.

No. 29,980.—Insulating Material and Rubber Substitute. W. T. Glover & Co., Manchester and London, England.

Essential feature. The word "Diatrine." Used since May 10, 1895.

No. 30,031.—Rubber Boots and Shoes. Boston Rubber Shoe Company, Boston and Malden, Mass.

Essential feature. The word "Norwood." Used since Dec. 5, 1896.

No. 29,865.—Clothes-Wringers. The American Wringer Co., Providence and Woonsocket, R. I., New York and Auburn, N. Y., and Erie, Pa.

Essential feature—the word "Eureka." Used since 1863.

No. 29,813.—Boots, Shoes and Rubbers. Stephen E. Miller, Jr., Albany, N. Y.

Essential feature—the word "Regent." Used since January 1, 1897.

No. 29,856.—Rubber-Lined Knitted or Woven Fabric Hose. Eureka Fire Hose Co., New York City.

Essential feature—one or more threads located between the rubber lining and the fabric exterior of hydraulic hose. Used since July, 1895.

No. 29,908.—Rubber Boots and Shoes. Boston Rubber Shoe Co., Boston and Malden, Mass.

Essential feature—the words, "Boston Rubber Shoe Company." Used since 1853.

DESIGN.

No. 28,940.—Support for Hose-Nozzles. George T. Brown, Jackson, Mich.

Term of patent fourteen years.

THE RUBBER SUPPLY AND THE COST OF RUBBER.

TIRES AND THE PRICE OF RUBBER.

OUR attention has been called by a rubber-manufacturer to an editorial in The *American Cyclist*, intended to refute the assertion of some other journal that the supply of India-rubber is running short, "and, unless some one shall discover a substitute, pneumatic tires will soon be at a practically prohibitive premium." The *American Cyclist* takes a particularly optimistic view. "Draw a belt 2000 miles wide around the entire earth," it says, "with the equator in the middle of it, and all of the land included therein, with the exception of comparatively insignificant mountainous districts, can be made to produce rubber of sufficiently good quality for the making of bicycle-tires. If every movable article of furniture or whatever else is designed for human convenience were hereafter to be made entirely of rubber, this immense field would supply the demand for the next thousand years."

The comment which the rubber-manufacturer makes upon this—in connection with a request with some expression from THE INDIA-RUBBER WORLD—follows:

"As far as rubber for bicycle-tires is concerned, I think that the only grade of rubber that has been successfully used comes from the valley of the Amazon or its tributaries. Perhaps some Nicaragua gum may have been used for the outside covering, but it certainly is not adapted for the inside of tires."

Our opinion is that the proper limit of the production of bicycle-tires is a matter of deeper concern to the trade than any possible exhaustion of the rubber supply. The cry of the scarcity of rubber is an old one, but the visible sources were never so extensive as at this time. Of course if the rate of increase in the production of tires which has been seen for the past few years should continue indefinitely, the whole surface of the earth would not hold enough trees to supply the rubber needed, but this is out of the question. As for the prices of tires, they are not likely ever to go higher. In relation to other manufactured articles, they are more apt to decline.

At the same time, our cycling contemporary is too extravagant regarding the extent of the rubber zone. Nor is it true that the rubber from every part of this zone is now adapted to the manufacture of tires. But after the great and rapid progress in the introduction of African grades, coupled with their steady improvement in quality, there is no warrant for assuming that they will not, in time, become available in the tire industry. Our correspondent is a large manufacturer, of long experience, but he is not in the tire line, else he might not be so positive that only Pará rubber has been used on bicycles.

WHAT VIANNA DID FOR AFRICAN RUBBERS.

"THE best thing that has happened to the rubber trade in my time," said a long-established broker, "was the scare caused by Vianna's attempt, a few years ago, to corner crude rubber. It ruined him, but it was worth millions to the trade. Why, but for this speculation, fine Pará rubber would be selling to-day at $1.50 a pound, even without such a thing as a bicycle-tire in the world. The salvation of the trade is the happening, now and then, of something to lift it out of a rut, and Vianna was the indirect means of getting everybody in rubber out of a rut of the deepest sort.

"The situation was this: Pará rubber was so much better than all other grades—and the difference was even wider then than now—that most manufacturers wouldn't touch anything else. The trade everywhere had been trained in the use of Pará rubber. Superintendents understood compounding it, its behavior under vulcanization, and all that sort of thing, but because African rubbers were not susceptible to the same treatment, they got a black eye every time. Then Vianna came along and forced the price of Pará rubber out of the reach of most people, and Africans began to get intelligent treatment. Superintendents experimented to see whether there might not be methods of manipulation especially suited to them, and the results showed the hitherto-despised rubbers to be good substitutes for Parás for many purposes and to be even better than Parás for some. But all of this required so much work and such a departure from well-beaten paths that, without an extraordinary incentive, it would hardly have been done yet. Vianna deserves credit for having supplied this incentive, and when he is gone the trade will owe him a monument. When it was once really appreciated that African rubbers had merit, attempts were begun to adapt them to every possible branch of the rubber-manufacture, until their consumption now almost equals in volume that of Pará rubber. A demand for Africans no sooner began to exist than efforts were made to fill it which revealed the existence of rubber forests, before unknown, that cannot possibly be exhausted in our time. All this while there have been improvements in the methods of preparing African rubbers for market, and yet I believe that we have only begun to learn what these rubbers are capable of. Thus, instead of depending upon Pará rubber alone, at excessively high prices, as the fate of the industry at one time appeared to be, we have vastly extended the list of available grades of rubber, and kept the prices of Pará grades within the reach of the consumers to whom they are a necessity."

GOOD AS PARA RUBBER AND CHEAPER.

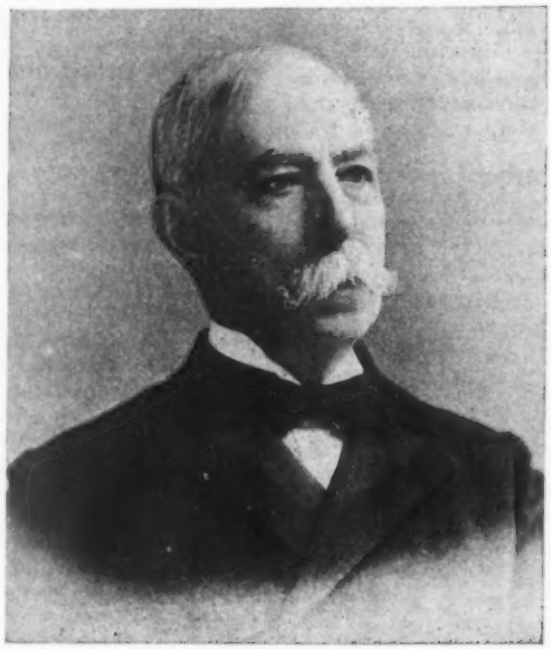
"A CERTAIN superintendent, not far from New York city," the broker continued, "has done something with African rubbers that will bear me out in whatever I have said in their favor. He is making an inner tube for bicycle-tires, equal in appearance to any that I ever saw, but without the use of a particle of Pará rubber. It is made of an admixture of three grades of African rubber, of distinctively different qualities, in proportions arrived at after a long series of experiments. The result is a rubber which is pronounced invariably by experts to be a particularly good specimen of fine old Pará. But it is stronger than any Pará ever seen, while not lacking in any other desirable quality. The first great advantage which this product possesses is that the cost of the rubber used is not more than half that of Pará gum, which will permit of a profit at less than standard prices. A second advantage is that the high quality of the goods will make them good sellers. While I have mentioned only bicycle-tires, this superintendent has adapted his new compound to many other purposes. For example, the rubber thread made from it excels in tensile strength any now in the market. It ought to be an easy matter for this superintendent to preserve the secret of his compound, because no sort of analysis possible could detect it.

"Getting such results from the admixture of inferior materials would excite no surprise in a metallurgist, since it is no secret that iron of a particularly high grade can be produced by the combination of certain ores, neither of which, alone, would yield iron having any value. If something analogous should prove true of India-rubber, the trade need not longer feel much concern about the market at Pará."

A VETERAN RUBBER-SHOE MANUFACTURER.

FORTY years ago the bulk of the rubber shoes manufactured in the United States were made in Providence, R. I., and were universally known as the "Providence shoes." At that time Providence was the chief seat of the rubber industry, but for various reasons the industry declined until at one time not a single rubber factory remained in the city. Within a few years, however, the business has revived, and now a number of establishments manufacturing a great variety of rubber goods, are located there. Among these is the factory of the Providence Rubber Shoe Co., owned entirely by ex-Gov. Augustus O. Bourn, where are manufactured the "Providence" and "Union" brands of rubbers.

This establishment has an unbroken record since 1840. In that year George O. Bourn (father of the ex-governor) and David Winslow formed a partnership for the manufacture of rubber shoes, under the name of Bourn & Winslow. From 1842 to 1847 Mr. Bourn continued the business alone. In 1847 the late Col. William W. Brown, of Providence, became a partner, under the firm name of Bourn & Brown. They were large manufacturers of the "Providence shoes" down to 1851, when vulcanized shoes finally succeeded in displacing them. At this date Edwin M. Chaffee, a friend and sometime partner of Charles Goodyear, and the inventor of machinery now universally used in the rubber-manufacture, was admitted as a partner, and the firm name became Brown, Bourn & Chaffee.



AUGUSTUS O. BOURN.

Upon the death of George O. Bourn, in 1859, his son, Augustus O. Bourn, took his place in the concern. In 1861 the same partners were incorporated under the name of the Providence Rubber Shoe Co., and continued the manufacture of rubber shoes until about 1870. At this time their business had so largely outgrown their facilities for manufacture that it was deemed wide to unite with the National Rubber Co. at Bristol, an enterprise which ex-Governor Bourn had started a few years before, becoming its treasurer and active manager.

Mr. Bourn retained his connection with the National company until it was reorganized, in about 1887 or 1888, when he retired from business and accepted the position of United States consul-general for Italy, at Rome, where he resided until the end of 1893. During this time he occupied the villa Campanari, the property of the Marquis Campanari, which was the scene of many sumptuous balls, dinners, and receptions. Here very many travelling Americans partook of the hospitalities of the ex-governor and his charming wife, and had the pleasure of meeting many diplomats and other distinguished visitors from all parts of the world.

Returning to the United States at the end of that year, Mr. Bourn again entered the rubber business and, in 1894, began to manufacture at Providence the "Providence" and "Union" brands of shoes. This may have seemed a small beginning, contrasted with the extent of the great rubber-shoe combination that had been formed during his absence from the country, but the success which has attended the new business from the start, warranting more than one enlargement, affords evidence that it was based on merit.

No man in the rubber-manufacturing business has had a larger experience than Governor Bourn. He is practically acquainted with every detail of the manufacture, as well as with the general management of the business. During his connection with the National Rubber Co. he brought out many new styles of rubber boots and shoes, between 1870 and 1887. Among these may be mentioned the well-known "snow-excluders," concerning which there has been so much litigation; fusion linings for "boots and lumbermen's goods," and the well-known patterns of "button gaiters," "Empress" and "Emperor." At Providence, also, the shoes afterwards called "alaskas" were manufactured several years before the other companies put any on the market.

Augustus O. Bourn has been very prominent in political affairs. He was a member of the Rhode Island senate from 1876 to 1883. In 1877 he was made chairman of the senate committee on finance, and also a member of the judiciary committee, and held those positions until he was elected governor of the state, in 1883. In 1884 he was re-elected governor by a larger majority than had ever been given to a governor in a contested election. In 1886–87 he was again sent to the senate, but at his request was excused from serving on regular committees. During this time he introduced an amendment to the constitution of the state extending the right of suffrage to foreign-born citizens on the same conditions as to native, and was chairman of the joint special committee to whom this amendment, as well as others, to substantially the same effect were referred. In due time this amendment, known everywhere as the "Bourn amendment," was adopted.

RECLAIMED RUBBER IN ENGLAND.

LAST month we quoted from an English trade journal a paragraph expressing doubt "whether the extensive employment of old rubber in America will be regarded generally as an indication of the superior ingenuity of the people, except in an uncomplimentary sense." It was further intimated that reclaimed rubber belongs in the same category with "wooden nutmegs and India-rubber mutton-chops"—whatever the latter may be. But here comes another English journal—the organ of the rubber trade in that country—containing the highest editorial endorsement of the American reclaimed rubbers. To be precise, we refer to the *India-Rubber and Gutta-Percha Trades Journal* (London), of April 12:

"It is not many years ago," says our contemporary, "since [American] reclaimed rubber was looked upon as being an undesirable and unreliable class of scrap rubber to handle, as it often contained acids, etc., which were the deadly enemies of rubber. Since then, however, things have changed, and to-day the trade generally looks at American reclaimed rubbers as being worthy of their confidence on account of their uniformity." Continuing, the English writer says: "Pará rubber is higher in price than it used to be. Would it not still be higher in price had it not been for the American reclaimed rubber, which is used more largely every year as it becomes more widely known and brought to a higher state of perfection?" The opinion is expressed that the yearly sale of hundreds of tons of this material must influence the crude-rubber market, "and were it not for these reclaimed rubbers (some qualities of which sell as high as 2 *s.* per pound), it is fair to presume that larger quantities of raw rubber would have been used." From an earlier issue of the same journal we quoted this assertion: "There is not a rubber-manufacturing firm in Great Britain, who know their business, but what use large quantities of reclaimed rubber, and find it very advantageous to do so.' And again: "In mechanicals it can, for certain grades, be used without any crude rubber being added at all, and for proofing it is perfectly safe in the proportion of 4 to 1, if a good quality of the 1 is used as a foundation. Why rubber-men persist in saying they never use it we know not, but their assertion we know to be all humbug."

Does the *Trades Journals Review* regard in any "uncomplimentary sense" "this extensive employment of old rubber" in England? It might occur to some minds that it might be more complimentary to English ingenuity if the trade there were able to provide its own supplies of reclaimed rubber, instead of sending worn-out rubber goods across the Atlantic to be ground up for further use.

THESE RUBBER-WORKS NOT A NUISANCE.

A SUIT was tried lately in a Brooklyn court against The P. Carter Bell Co. (New York), manufacturers of rubber substitutes, on the charge of violating a city ordinance by maintaining a nuisance at their works, No. 319 Palmetto street. The factory began operations in January last, since which time several complaints from residents in the vicinity have been carried to the Brooklyn board of health, to the effect that the fumes emitted were a menace to the public health. These complaints were in no case substantiated, and the factory remained in operation. The next move was made by the Tax-Payers' Association of the Twenty-sixth Ward of Brooklyn, who sent a petition to the mayor, who in turn referred it to the health department, which department was forced to prosecute the rubber company for a misdemeanor. P. Carter Bell, president of the company and Curtis P. Smith, the secretary-treasurer, were placed on trial on June 23, the proceedings being adjourned to June 29 and concluded on that date.

Several citizens testified that the odors from the factory were so offensive that the doors and windows of their houses had to be kept closed, and some that members of their families had been made ill by the odors. Dr. J. Kirk, a neighboring physician, testified that the effect of the odors was dangerous to health. A city inspector of nuisances called by the prosecution testified to having visited the works several times, and to having detected a slight peculiar odor, but, not being a physician, he could not testify as to its possible effect upon human health. He had not found any basis for this complaint of the tax-payers.

Dr. Durand Woodman, a chemical expert from New York city, who had visited the factory, was of the opinion that the gases emanating from the defendants' factory were not in sufficient quantity to be injurious to the public health, and he did not consider that their business constituted a nuisance. His views were corroborated by several other witnesses, including professional men.

By agreement of counsel a compromise was reached, under which the prosecution was withdrawn. The defendants had been contemplating a removal to larger premises, necessary in view of the growth of their business, and the compromise was on the following terms: That it should go on record that their works were not a menace to public health; that they had not been guilty of a misdemeanor under the city ordinances; that they would move their factory because the premises now used are no longer adequate for their business, and for no other reason; that they will vacate on August 9, next, without hindrance or molestation from the plaintiffs; and that this compromise was agreed to by both parties.

RUBBER-EXPLOITING SCHEMES.

THE South American Exploration Co. was organized in Jersey City, N. J., on June 19, the declared object being to explore and develop India-rubber forests and mining lands in Central America and South America. It is stated that the paid-up capital is $10,000; also that concessions to be developed have been obtained already by Frank C. Nicholas, of Summit, N. J., who has spent the past two years in the countries named. John H. Winser, of the American Museum of Natural History (New York), is the secretary of the new company. In response to some inquiries from THE INDIA RUBBER WORLD, Mr. Winser writes: "I have nothing at the present time to communicate that would be of interest to you."

* * *

TO THE EDITOR OF THE INDIA RUBBER WORLD: In reply to your inquiry in regard to the Kentucky Coffee and Rubber Co., incorporated about one year ago, I would say that the scheme to cultivate coffee and rubber in Mexico has about fallen through, owing to the fact that the ground has been misrepresented. A committee of three went to inspect the ground and found, instead of a paradise, a most uninviting place and totally unfit to carry on the work they intended to do. Perhaps in time a better place might be found, but the first experience has about dampened the enthusiasm of most of the members of the company, and it will be a hard thing to interest capital in a scheme of this kind. I am sorry that a better report cannot be made. JOHN H. M'LAREN.

Covington, Ky., May 26, 1897.

* * *

THE British India-Rubber and Exploration Co., Limited, with a capital of £200,000 in £1 shares, and £100,000 worth of 6-per-cent. first-mortgage debentures, has been formed in London, to acquire a large rubber-growing territory on the west coast of Africa. The promoters evidently base their hopes of success upon the idea that there may be a repetition of what has happened in Lagos, where from practically nothing the production of India-rubber rose in two years to the value of £270,000. [Since this paragraph was placed in type, the prospectus has been withdrawn, many journals having pointed out the undesirability of investing in rubber forests which, according to the promoters of the scheme, did not contain on an average more than three rubber trees to the square mile. All indications point to less activity in the near future in the "floating" of rubber-planting or rubber-exploiting enterprises on the other side.]

MECHANICAL RUBBER MANUFACTURERS.

A CALLED meeting of the manufacturers of mechanical rubber goods was held at the Astor House, in New York, on June 10. The object was to hear a report from the commmittee on permanent organization, appointed at a previous meeting, which was presented by the chairman, A. Spadone. The report having been approved, the name was adopted of the Mechanical Rubber Manufacturers' Association. Henry C. Morse, temporary chairman, and John J. Voorhees, temporary secretary, were reëlected to serve until the first annual election under the provisions of the by-laws reported by the committee on organization.

The plan adopted involves the creation of an executive committee of five, having wide powers, and practically constituting the association so far as the transaction of business is concerned. In this respect, the plan of organization resembles that of the Rubber Tire Association. An executive committee having been chosen, the manufacturers adjourned, subject to call. It is understood that one of the gentlemen named, hesitating to undertake the work required, has not yet signified his acceptance. Further action has been delayed in the hope that he will finally decide in the affirmative.

The organization here recorded is not the first in the trade. About 1890 a Mechanical Rubber Manufacturers' Association was formed, but it did not long maintain an active existence, although not formally dissolved for several years. An important consideration which led to its formation was the unsatisfactory scale of prices, but an advance was no sooner agreed upon than many of the leaders in the trade seemed to lose all interest in the association. Then, when the price agreement fell to the ground, these gentlemen voted the organization a failure. The members contributed their yearly dues, however, and when, at the suggestion of President Spadone, the affairs of the organization were wound up, there remained in the treasury upwards of $1400 to be distributed among the members.

THE PROPOSAL TO TAX CHICLE.

IT has been proposed at Washington to make Chicle—which is the base of the ordinary chewing-gum—dutiable at 10 cents a pound. So large are the annual imports that this rate would yield $300,000 or more revenue. We find this in the Chicago *Times-Herald*:

"So far as the manufacturers of chewing gum are concerned, there are some who wouldn't give a rap if congress imposed a duty of 25 cents a pound on Chicle. Fred B. Amend, local manager of one of the largest gum manufacturing companies in the country, says that his company would welcome such a tax as is proposed by congress. It would, in his opinion, have the effect of driving off the competition of a large number of manufacturers of cheap and worthless gum, without increasing the price of the standard brands or reducing the wages of the women and girls employed in the manufacture.

"'Such a duty would hurt nobody but the scheming manufacturers who depend upon gift enterprises for the sale of their product,' said Mr. Amend, 'and would not raise the price of chewing-gum a cent. Custom has fixed the price of chewing-gum at 5 cents a package of five pieces, and the public would not stand a raise in the price. The proposed duty would undoubtedly lessen the profits of the manufacturers, but not to the extent that they would have to lower the wages of their employés. Besides, the big manufacturers have enough Chicle on hand already to last them two or three years.'"

PROGRESS ON THE CONGO.

TRAINS on the Congo railway are now running daily to the Inkissi affluent of the great river the first locomotive having crossed the stream on April 19. The distance from the starting-point at Matadi is 171 miles, and the last large stream on the way to Stanley Pool has been bridged. Reference to a map of this new Congo rubber route published in THE INDIA RUBBER WORLD last January will show how important is the progress above recorded, and how favorable to the expansion of the rubber trade. The expectation now appears reasonable that during next year the railroad will be completed to Stanley Pool, and then the entire region to traverse which Stanley toiled for five months, and where his black comrades nearly starved to death, may be crossed almost without fatigue in the sunlit hours of one day.

Élisee Reclus, the geographer, wrote a while ago that he was amazed whenever he contemplated the vast work done on the Congo in so short a time, says the New York *Sun*. That work extends to every part of the Congo basin, the second largest river system in the world. It is promoted by forty steamers and forty towboats, carried in small pieces on the heads of men around 235 miles of cataracts and now afloat on 7000 miles of upper Congo waterways; and that work, marred though it has been by many instances of the cruel and unjust treatment of natives by men who were not worthy of their trust, will be remembered in history as one of the great achievements of this century.

TRADING IN RUBBER STOCKS.

IN the table below is shown the extent and nature of the transactions in Rubber stocks on the New York Stock Exchange by weekly periods during June; also, for the same month in each preceding year since the incorporation of the United States Rubber Co.:

LISTED ON THE NEW YORK STOCK EXCHANGE.
201,660 shares Common=$20,166,000.
194,005 shares Preferred=$19,400,500.

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
June 1–5, 1897.....	2,531	12¾	10	3,840	61½	55
June 7–12	1,478	12¾	11	1,882	61¼	60
June 14–19	907	13½	12⅞	623	62½	61¼
June 21–26	982	13	12½	1,377	61	59
June 28–30.....	654	12½	12	879	61	56¾
Total, June, 1897.	6,552	13⅛	10	8,601	62½	55
Total, June, 1896.	15,805	22	14¾	9,203	83	73
Total, June, 1895.	111,158	48	37¼	8,257	98	91⅝
Total, June, 1894.	860	39¾	36	12,95	95	88
Total, June, 1893.	,474	45	34½	2,323	87	74

NO TRUTH IN IT.

COMPETITION is without doubt the life of trade, but it should not be carried to such a point that it loses sight of the two fundamental principles of trade—Honesty and Truth. Now somebody has been giving out the report that no more "American" rubber goods were to be made. This is absolutely untrue, as we learn from the officers of the company. Not only will the "American" brand of rubber boots and shoes be made the present season, but it will be made in very large quantities, and in a higher quality than ever before.

ENGLAND'S MONOPOLY IN CABLE-BUILDING.

SIR HENRY MANCE'S presidential address before the Institution of Electrical Engineers, noted at some length in a late INDIA RUBBER WORLD, contained some statements to which the *Electrical Review* (London) takes exceptions. For instance our contemporary remarks:

"The president sounded a note of alarm when he said that England can no longer boast of a monopoly in this business. The development of French submarine telegraph enterprise is certainly a costly luxury to the French taxpayer, and when he gets to know that cables can be made and laid successfully at about one-third less by English firms, we doubt which will influence him most, his patriotism or his pocket. As for the government works at La Seyne, that establishment may be looked upon principally as a model factory and training-school. At St. Tropez, about 600 knots of cable was made in 1892, and was laid between Marseilles and Bizerta, La Goulette, and Tunis, in 1893, from an English cable-steamer, with English officers and crew. The works at Calais are probably the largest, and have turned out most work, but taking them all, with the Italian works at Spezzia thrown in, we shall attach no more importance to the fear of our monopoly in cable-manufacture passing very quickly from us than Sir Henry Mance does to the much talked of telegraphic isolation of England if war should break out with any foreign country."

In this connection a point which came up at the last annual meeting of shareholders of the Telegraph Construction and Maintenance Co., Limited (London), is of interest. Formerly they enjoyed a monopoly of business with America, having built and kept in repair the Atlantic cables, but with increasing competition the situation had changed. As an example of this, the chairman mentioned that the French had embarked upon great works, and were now determined to do for themselves that which years ago they accomplished with British assistance. The company enters upon their new year, however, in better condition than at the beginning of the preceding year.

Returning to the subject, the *Electrical Review* says: The following extract from a usually well-informed contemporary furnishes an instance of how Germany is sometimes misunderstood in relation to her trade rivalry with Great Britain. The *Globe* says: "Germany, like France, has begun to compete with us in the manufacture and laying of submarine cables. Quite recently a German company laid a cable between Emden, in Germany, and Vigo, in Spain. It is really the first section of a system of submarine lines which Germany hopes to lay in order to correspond directly with the two Americas and Africa. Hitherto German messages have had to pass over British and French lines." Although the name of the company owning the cable referred is undoubtedly German [Deutsche See-Telegraphen-Gesellschaft], and the cable route is of advantage to that country, it is wrong to infer that the cable must necessarily have been "made in Germany," or indeed that the capital invested in this enterprise was furnished from that country. As a matter of fact, the cable in question was manufactured by the Telegraph Construction and Maintenance Co. at Greenwich, and laid by them, and to a very large extent the capital, we understand, was supplied by the same company in conjunction with the Eastern Telegraph Co. and the Brazilian Submarine Telegraph Co., both of which are English.

WHAT is the most important part of the bicycle? The tire, of course. You can get long somehow with almost any kind of a bicycle provided it has a sound tire, but with a crippled tire the best machine made is useless.—*American Cyclist.*

RANDOM NOTES FROM PARA.

TO THE EDITOR OF THE INDIA RUBBER WORLD: The budget for the state of Pará for the fiscal year 1897–98 is made up of larger estimates than ever before. The receipts are estimated at 15,240,000 milreis, of which 12,000,000 are to come from export duties, and the greater part of that from India-rubber. The export duty on rubber has been raised to 22 per cent., at the demand of the governor for more money for public improvements. Several of the exporting houses, particularly the Portuguese, were disposed to acquiesce in the increase. The state budget in Amazonas is also unprecedentedly large and for the same reason—a larger output of rubber at a higher valuation. The receipts are estimated at 9,824,400 milreis.

During January, February, and March the quantities of India-rubber exported via Pará from Peru and Bolivia were as follows (in pounds):

GRADES.	Peru.	Bolivia.	Total.
Fine	122,716	154,923	277,639
Medium	1,560	.....	1,560
Coarse	61,822	31,924	93,746
Caucho	269,009	.....	269,009
Caucho, coarse	19,903	.....	19,903
Total	475,010	186,847	661,857

The classification "sernamby de caucho" is just beginning to be used in the trade. As sernamby is the term applied by the Portuguese to the grade of rubber known in America as "coarse," I shall speak of this new commodity as "coarse caucho."

Two Americans, Messrs. Temples and Nickersen, are asking the Pará congress for a concession for the privilege of opening a road from Santarem, in this state, to Cuyabá, in the state of Matto-Grosso. A concession has already been granted by the latter state. It is expected that the exportation of rubber from certain districts will be largely facilitated should this highway be opened.

The Pará Electric Lighting Co. (Cia de Luz Electrica Paraense) were sold out at auction to R. Santos, of R. Santos & Co. (New York), who will be president of a new company to be formed.

The Peruvian consul-general in Pará, Don Carlos Larrañaga, has announced that a commercial exposition will be opened at Lima on July 28.

The governor of Amazonas, at the recommendation of the governor of Pará, has decreed that steamers shall not be detained longer than forty-eight hours in lading rubber at Manáos.

GRAO PARA.

Pará, Brazil, May 15, 1897.

"WOONSOCKETS" FOR 1897.

THE old-established rubber foot-wear brands which have been on the market so many years, and have built up so large a trade, show no deterioration in their new goods for the present year, notwithstanding the cut in prices that has been made all along the line. The "Candee," "American," "Wales-Goodyear," and "Woonsocket," are all up to their former high standard; in fact, they are all a little improved, as some of the new lasts introduced this year are certainly handsomer than anything seen before in rubber footwear. This is true especially of the Woonsocket goods. The Woonsockets have always been famous for their wearing qualities, and, by the introduction of an entirely new line of lasts this season, they have been much improved in appearance. The 1897 Woonsockets are, without question, the finest goods ever put out with this brand.

ANNOUNCEMENT—THE NEW YORK TIRE CO.

TO THE EDITOR OF THE INDIA RUBBER WORLD: The Revere Rubber Co., the manufacturers of all goods sold under the name of the New York Tire Co., will hereafter take the business under their own name, and the well-known "Samson" tires will be offered to the trade by their representatives and from their various stores. The headquarters of our tire industry will be at the company's works at Chelsea, Mass. and under the direct management of W. B. Hardy, general manager of the Revere Rubber Co., and F. N. White, manager of the tire department.

The number of perfect tires per hundred made at the factory governs the perfection of the tires upon the road. Our patent machinery enables us to make ninety-nine perfect tires out of every hundred—every imperfect tire being a first-class second. We can make them as fast as you want them. The factory is at Chelsea. We have branches at New York, Boston, Chicago, Cleveland, Cincinnati, St. Louis, Pittsburgh, Philadelphia, Louisville, Buffalo, Denver, Minneapolis, and Rochester.

REVERE RUBBER CO.,

No. 63 Franklin street, Boston, Mass., June 17, 1897.

AFFAIRS OF THE TRENTON RUBBER CO.

THE receiver of the Trenton Rubber Co. appointed on April 8 last—John T. Bird, a former vice-chancellor at Trenton—on July 2 filed his inventory of the company's affairs in the chancery court. The assets are placed at $443,083.40, of which amount $324,593 are either disputed or doubtful, the remaining assets being only $118,490.40. No estimate is made of what may be realized from the doubtful assets, which include $270,432 claimed to be owing to the company by Frank A. Magowan for over-draft of his account made during his service as president.

The liabilities are placed at $241,953.65, including debts of $49,550 due to General William H. Skirm, $19,941 to Allan Magowan, $4000 to Sarah J. Magowan, $57,000 to Trenton banks, $13,080 to Ida M. Alpaugh, and $8000 to Samuel Walker, Jr. The company's real estate, mills, and machinery are estimated to be worth $60,000.

THE BIG BICYCLE FOR THE PARIS EXHIBITION.

TO THE EDITOR OF THE INDIA RUBBER WORLD: We have your favor of recent date, enclosing a clipping from a bicycle paper, headed, "Largest Tires in the World," and referring to a gigantic bicycle to be built for the Paris exposition of 1900, the tires to be furnished by us. We do not know who is responsible for the publication of that article, and, while greatly pleased at the publicity it has given our company, we regret being obliged to say that there is no foundation for the report. We understand that such a bicycle is to be built for Paris, but that it is to be supplied with tires made of steel, which would seem to be necessary if the statements in the article are correct, namely: "There will be a great entrance in each of its wheels, winding stairways up through the tires," etc. We doubt somewhat the success of making pneumatic tires, under these conditions.

SPAULDING & PEPPER CO.

Chicopee Falls, Mass., June 16, 1897.

DECLINED.—"Excuse me," said the pneumatic tire to the tack which had tried to introduce itself; "excuse me, if you please, but really I do not consider your point well taken."

AKRON AS A RUBBER CENTER.

THE Crawford Wheel and Gear Co. (Hagerstown, Md.) were in correspondence lately with the chamber of commerce of Akron, Ohio, regarding the erection of a plant in the latter town for making their vehicle-tires. Mr. W. R. Talbot, secretary of the chamber, has written since to THE INDIA RUBBER WORLD:

"The Crawford bicycle-factory will remain at Hagerstown. They have control of a pneumatic buggy-tire that they will dispose of. Akron has three rubber-works—the Goodrich, the Diamond, and the India-Rubber. Akron's advantages are its excellent railroad facilities and cheap fuel. The city is not negotiating just now for new industries, but will be glad to see new and profitable ones locate within its borders. To such land will be donated."

LARGE BALLS OF PARA RUBBER.

THERE lately arrived from Pará, by the steamer *Horatio*, two large biscuits of fine rubber, consigned by Adelbert H. Alden to the New York Commercial Co., which have been photographed for THE INDIA RUBBER WORLD. One of the specimens weighed 1279 pounds and the other 864 pounds. Upon landing they weighed 1264 and 834 pounds respectively. The larger will seem all the more remarkable when it is stated that one man can collect and cure only about five pounds of rubber in a day, so that this ball represents the labor of the maker for more than six months. In making it 1200 kilograms of pure rubber milk were used, showing that nearly 45 per cent. of the milk was solid caoutchouc. Great care had to be taken in the preparation of both balls, and they were a matter of no small pride to the makers. These balls were the object of a great deal of curiosity in Pará, and no doubt will prove of equal interest to many people in this country.

BALL WEIGHING 1264 POUNDS.

BALL WEIGHING 834 POUNDS.

COMBS have always been the principal article of manufacture in hard rubber, and they are made in an almost infinite variety from a dainty trifle for the baby's head to a serrated hoe for the horse's tail. Probably the next article in point of quantity manufactured would be syringes, but during the last year or two the demand for certain parts of electrical apparatus for which hard rubber is peculiarly adapted has given the business a great impetus in that direction, which bids fair to be increased in the ratio of the advancement in electrical science.

TRADE AND PERSONAL NOTES.

BUSINESS is reported very brisk with The L. Candee & Co. (New Haven, Conn.), who have had over 1300 hands employed of late, which is a larger number than for two years past, a portion of the force working overtime. As many of the hands are engaged on piece-work, and they are given all that they can do, they are said to have been earning unusually good pay.

=George E. Hutchins, assignee of the New Bedford Rubber Co., Thomas P. Himes, proprietor (New Bedford, Mass.), advises THE INDIA RUBBER WORLD that he has sold the stock and fixtures for $2750, at which figure he had estimated the actual value of the assets. The liabilities were $3000. After deducting all expenses of the assignment, about $500, he was able to pay the creditors 75 per cent. of their claims.

=Mr. George R. Bidwell, the new collector of the port of New York, was one of the first manufacturers of pneumatic bicycle-tires in this country, and is still interested actively in the bicycle trade, being secretary of the Spalding-Bidwell Co. (New York.)

=The Chicago Rubber Clothing Co. (Racine, Wis.) are not going out of business, as might be inferred from the surrender of their charter in Illinois. They were incorporated in that state in 1882, when they had offices in Chicago and a mill at Grand Crossing, a suburb of that city. In 1886 they removed to Racine and became a Wisconsin corporation, and their formal certificate of dissolution in Illinois has been filed merely to avoid the yearly quest of the taxing authorities. Mrs. Emma V. Laughton, secretary and manager, says: "We are more in business than ever. We are prospering and expect good results." Mrs. Laughton has been in the east lately on a trip for recreation.

=The Providence Rubber Co. (Providence, R. I.), have added a 300-horse-power Harris-Corliss steam-engine and other machinery, to increase their production of rubber shoes.

=It is claimed that Chicago sells 20 per cent. of all the rubber footwear worn in the United States. There are twenty-six rubber-shoe "agencies" there, besides the big boot and shoe jobbing houses, all of which carry a line of rubbers.

=Among the delegates to the recent international trade conference at Philadelphia was J. N. Recuero, president of the chamber of commerce at Panama, who is said to have made a fortune in India-rubber. He is now a general importer of American provisions and hardware.

=In the matter of the Eastern Rubber Manufacturing Co. (Trenton, N. J.), an order has been entered by the vice-chancellor that creditors must present their claims to the receiver within two months from June 8, or be excluded from the benefit of dividends.

=Harburg rubber-manufacturers are complaining of the competition of American cycles and Russian rubber shoes. The German duty on cycles is only ¼ marks a machine, and on rubber shoes, 60 marks on 50 pounds, whereas Russia imposes a duty of 222 marks on 50 pounds.

=The Cable Rubber Co. (Boston) have sent out announcements to the trade of their having secured the eastern agency of the Hodgman Rubber Co. (New York), of which mention has been made already in THE INDIA RUBBER WORLD. In connection with this attention is called to the very extensive general line of rubber goods which they carry, said to be the largest of any house in New England.

=Boyd, Jones & Co. (Baltimore, Md.) announce that they have been appointed selling-agents by the New York Belting and Packing Co., Limited, and have opened a branch house at No. 12 North Charles street, where they will carry a complete stock of mechanical goods manufactured by that concern, consisting of belting, packing, hose, tires, bicycle sundries, etc. Boyd, Jones & Co. have succeeded to the business of the Patapsco Rubber Co., and will also have a complete line of druggists' rubber sundries. Charles D. Cugle, until recently secretary of The Alfred Ely Co. (Baltimore), and in charge of their mechanical rubber goods and bicycle sales, will have charge of this new branch. This is entirely separate from the rubber boots and shoes and mackintosh business of Boyd, Jones & Co., which will be conducted at No. 22 Hopkins street, Baltimore, as heretofore.

=Mr. Robert D. Evans and his family are spending the summer at Dawson Hall, their residence at Beverly-by-the-sea, Mass., having closed their New York residence early in June, Mr. Evans's yacht, the *Toinette*, has been put in commission for the season.

=Mr. E. H. Cutler, formerly selling-agent for the Woonsocket Rubber Co., sailed for Europe on June 30, this being his second recent voyage thither. Though interested in other affairs now, it is not unlikely that Mr. Cutler may be in the rubber business again before long.

=Mr. Charles L. Johnson, of the United States Rubber Co., sailed about a week ago for Europe, to take a vacation which he long has been promising himself, it being practically his first respite from business since he first put on the harness.

=The Hon. E. S. Converse has been making further investments in Boston real estate. His latest purchase was a five-story building and about 3025 feet of land—Nos. 15–17 Columbia street—assessed at $64,800.

=J. A. Dennis, export agent for the Trenton Rubber Co. (No. 30 Warren street, New York), reports that there has been a good demand for mechanical rubber goods from Mexico and other countries to the south of the United States.

=The incorporation of the Duluth Rubber Co. (Duluth, Minn.), by the partners in the St. Paul Rubber Co., was mentioned in the last INDIA RUBBER WORLD. Secretary Jacob Hammer, of the latter company, writes: "The Duluth Rubber Co. was incorporated recently by members of our house. We purchased the stock of the Duluth Rubber Co. about April 1, but have no intention of continuing the business there at present, and are simply disposing of the old stock, after which we shall close the place. It may be possible we shall decide to reopen later, in which event we shall duly notify you."

=The Revere Rubber Co. (Boston, Mass.), in another column, make an announcement of interest, with regard to taking under their own control the business of the New York Tire Co., whose goods they have manufactured from the beginning. The result will be the sale of tires direct by the maker to the dealer, doubtless with benefit to all concerned. Manager Frank N. White, of the tire company, continues his connection with the business.

= Augustus O. Bourn, Jr., who is actively associated with his father in the management of the Providence Rubber Shoe Co., is an *alumnus* of Brown University, an LL.B. from Harvard, a member of the Rhode Island bar, and a partner in a law firm at Denver, Col.

= The Meriden Rubber Co. (Meriden, Conn.) have been incorporated with $10,000 capital, to make, buy, and sell rubber toys and balls. The incorporators are Wilhelm A. Zickermann, Lyman H. Francis, and H. George Talcott. The management will be in the hands of Zickermann, connected until lately with the Metropolitan Rubber Co. (Wallingford, Conn.), who fromerly made this class of goods, but abandoned them on account of the growth of their other departments.

= The Canadian government, in answer to a request that the duty on India-rubber belting, reduced in the new tariff schedule from 32½ to 20 per cent., be restored to the former rate, have replied that the matter was fully considered at the time of making the reduction, and as the article is largely used by manufacturers, the duty cannot be increased.

= The New York Commercial Co., who are a Virginia corporation, with principal offices in New York city, have asked the comptroller of New York to reduce the assessment upon their capital stock used in this state for the year 1896. The company's paid-up capital is $1,540,000, and the comptroller assessed the company upon $900,000 capital employed in this state during the year. It is insisted that not quite half that amount of capital is employed in New York.

= The Woonsocket Rubber Co. and the National India Rubber Co. have excellent displays of their products at the industrial exposition at Providence, R. I., which was opened on June 17.

= Coupons due July 1, 1897, on the 6-per-cent. mortgage debenture bonds of the New York Belting and Packing Co., Limited, were payable on and after that date at the office of the Knickerbocker Trust Co., No. 66 Broadway, New York. Also, coupons due July 1 on the first-mortgage gold bonds of the Mechanical Rubber Co.

=The factory of the Kokomo Rubber Co. (Kokomo, Ind.,) was illustrated in a recent special edition of the Kokomo *Tribune*, which gave also some facts of interest relating to the success of the company. They have 100 hands on the pay-roll, and the rate of output of tires is five times as large as at this time last year. Some shipments have been made to South America and Australia.

=The trade will be pleased to hear that Mr. Chester J. Pike, after an illness of several weeks, is rapidly improving. Few men in the boot and shoe trade are better known than Mr. Pike, and still fewer have a more brilliant record as a salesman. The rapid strides made by the "Wales-Goodyear" and "Connecticut" brands since Mr. Pike took hold of them nine or ten years ago have been simply phenomenal.

=Mr. E. H. Paine, director of sales of the United States Rubber Co., has been in the west, going as far as St. Louis. He seems to fit as naturally into his new position as if he had been in it all his life, but then there is every reason that he should, if twenty-five years as selling agent counts for anything.

=It looks as if the Woonsocket rubber boots and shoes would reach enormous sales this season. There are many people in the trade who used to complain because all the rubber footwear brands had restrictions on their sale. Now that the restrictions have been taken off the Woonsocket brands, these people have got just what they wanted, and the result promises to be a very large Woonsocket output for the season of 1897 98.

=Of the 50,000 shares of capital stock of the Boston Rubber Shoe Co., according to a published report, 25,740 are in the name of E. S. Converse, 8125 in that of the estate of James W. Converse, 1500 of C. C. Converse, 1000 of H. E. Converse, 2170 of C. H. Osgood, 2500 of E. L. Corning, and 8965 in the names of sundry small holders.

=The Fairfield Rubber Co. (Fairfield, Conn.) have had a good demand covering all their lines of carriage cloths. They have been so busy on orders for some time past as to be obliged to work over time.

=The National India Rubber Co. (Bristol, R. I.) are reported to have orders for upwards of 18,000 cases of overshoes and arctics, with a view to resuming the regular production of this class of goods. The manufacture of footwear at Bristol was stopped several months ago, and some of the machinery used for this purpose was taken away. Meanwhile a reduced force has been turning out tennis goods, carriage-cloth, insulated wire, and druggists' sundries, but the manufacture of boots and shoes was so long the main branch of the industry that its revival will be of great importance to Bristol. The change of policy with regard to the Bristol factory was foreshadowed in recent newspaper interviews with Colonel Samuel P. Colt, president of the company. He was reported as saying that he had been instrumental in bringing about the election of Mr. F. M. Shepard as president of the United States Rubber Co., "which now precludes the possibility of any indefinite shutdown, which was feared at one time, when the business of the larger company was guided by other hands." President Colt is understood to have insisted that, in order to operate the Bristol plant successfully, it would be necessary to manufacture rubber shoes. With the beginning of the bicycle-tire season, the plant will be equipped also for turning out the "Alligator" and "Kangaroo" tires, made hitherto at Chelsea, Mass. On the whole, it is expected that a full force of hands will be employed.

=At the annual meeting of the Easthampton Rubber Thread Co. (Easthampton, Mass.), on June 22, the directors and officers were reëlected and a semi-annual dividend of 3 per cent. declared on their capital of $400,000.

=At the Millville (Mass.) mill of the Woonsocket Rubber Co., which had been making 3000 pairs of boots per day from the beginning of the season, the rate of production was considerably increased about the middle of June by the hiring of additional boot-makers.

=The reclaimed rubber factory of The E. H. Clapp Rubber Co. (Boston), at Hanover, Mass., is reported to be running on full time, with a full complement of employés. The last annual report of the corporation, filed with the state authorities, shows: *Assets.*—Real estate, $29 804.70; machinery, $36,600.62; cash, bills receivable, and merchandise, $145,077.27; total $211,482.49. *Liabilities.*—Capital, $200,000; debts, $1,457.45; total, $201,-457.45.

=The Firmus ball pneumatic tire, lately brought out in Germany, consists of a large number of hollow rubber balls, some 2 centimeters (= .79 inch) in diameter, inserted in a row, close to each other, in the inner tube. The tube is coated with a composition, made specially for this purpose, extremely elastic and light and insensible to heat or cold, so that all the spaces, between the balls and tube, are filled up, the hollow balls lying completely imbedded in the composition. This tube is then, as in the case of the old pneumatic tube, covered with a casing. The tire can be cut through or punched in several places, without losing its elasticity or even becoming unserviceable. This becomes apparent, when we consider that the rubber balls are of such small dimensions as always to retain their form, springing back into their original shape, even if often subjected to extreme pressure, the danger of their being seriously injured being infinitesimal. In respect to weight, the Firmus tire is only very slightly heavier than the present pneumatic tire, this excess of weight being amply compensated for by the doing-away with air-pump, valve,and paste-box.

=A new company registered in London is Coops, Limited, formed to acquire the business of Coops & Co., Limited, cycle-manufacturers of Liverpool, and the freehold of the rubber-works lately occupied by the Hille India-Rubber Co., Limited, manufacturers of rubber balls at Eccles, Manchester, now in liquidation. The transfer includes patents for India-rubber-ball making and cutting India-rubber sheeting. The new company propose also to engage in the manufacture of tires. The capital is £40,000, and £10,000 of 4½-per-cent. debentures are to be issued.

=The New Jersey Car Spring and Rubber Co. (Jersey City) expect to bring out this month a new illustrated catalogue of their products, much more extensive than any hitherto issued by them.

=The Pan-American commercial delegates, as a part of their entertainment while guests of the city of Providence, R. I., were given an opportunity to visit the plants of the National India Rubber Co., the Davol Rubber Co., and the Woonsocket Rubber Co. They were entertained also by Ex-Governor A. O. Bourn, of the Providence Rubber Shoe Co.

=Last month was mentioned a resort to arbitration by the Apsley Rubber Co. (Hudson, Mass.) and their employés to settle questions arising from a new scale of wages, which at that time promised to end satisfactorily. On account of later complications this course was not carried out, and the company's shops were closed, with a notice that on a certain date work would be resumed, when former employés would be given the preference, provided they applied as individuals and not as members of the local rubber-workers' union. Some employés have returned to work on these terms, accepting the new wage scale, which, while lower on an average than the old, is claimed by the company to be higher than is paid elsewhere in the manufacture of the same class of garments. At last accounts, however, most of the force were on strike, insisting upon arbitration, and that the rubber workers' union should be recognized by the company.

=The Wales-Goodyear company have two very large factories at Naugatuck, Conn., but from the amount of attention that is being given this particular brand in the trade, it looks as if they would have to run overtime next fall.

=Mr. Henry C. Pearson, editor of THE INDIA-RUBBER WORLD, arrived at New York on July 1, from a visit to Europe beginning in April last.

=A representative of the Davidson Rubber Co. (Boston), who recently visited the trade from Baltimore to the far south, reported a good trade in druggist's sundries, particularly in New Orleans.

=The Scottish India-Rubber Co. (Glasgow) are manufacturing a golf-ball of white Gutta-percha throughout, which prevents the color from chipping off.

=The Victoria Rubber Co., Limited (London), proprietors of the Victoria India-rubber mills at Edinburgh, long established in the waterproofing trade, have added the production of rubber boots and shoes to their business.

=The Rubber Company of Scotland, Limited, is the name of a new mechanical-goods concern organized by Robert B. Black, who has filled the office of secretary of the Clyde Rubber Works Co., Limited (Glasgow), since their organization in 1883 until within a short time past. William E, Burrill now takes charge of the commercial department of the Clyde company.

=In the Pennsylvania legislature, in the lower house, a measure levying a tax of $1 a year on pleasure carriages, tricycles, and bicycles not equipped by pneumatic tires was defeated by a vote of 63 to 70.

=The store of the St. Paul Rubber Co., at No. 372 Robert street, St. Paul, Minn., has been purchased by a new concern, the Thompson Rubber Co., who will conduct a wholesale and retail business in rubber boots and shoes, mackintoshes, mechanical goods, and druggists' sundries, under the management of J. Hurd Thompson, formerly of the Omaha Rubber Co. (Omaha Neb.) The store in question has been conducted by the St. Paul Rubber Co. as the headquarters of their retail business. They will continue their wholesale and jobbing store at No. 145 East Third street.

=E. L. Toy, general-manager and treasurer of the Diamond Rubber Co. (Akron, Ohio), resigned on June 24, since which time he has formed a connection with the Whitman & Barnes Manufacturing Co., of the same city, who have built up a large business in the manufacture of rubber horse-shoes and now contemplate the addition of other rubber specialties to their output.

=The Diamond Rubber Co. (Akron, Ohio) are reported very busy in several departments, including mechanical goods. They are running fifteen hours a day on fruit-jar rings.

=The semi-annual dividend on the preferred stock of the United States Rubber Co. will be payable on July 15.

=The New York Belting and Packing Co., Limited, report the delivery, within four weeks, of 24,500 feet of their 2½ inch test rubber fire-hose.

=Schedules filed by the receiver of Oliver, Straus & Co., dealers in bicycle supplies (New York), show direct liabilities, $55,293; contingent liabilities, $32,049; nominal assets, $97,920; actual assets, $6351. The contingent liabilities are endorsements on notes.

=F. C. Howlett & Co. (Buffalo, N. Y.) advise THE INDIA RUBBER WORLD that they have had an exceptionally good business since moving into their new location. "New Brunswick" tires and garden-hose have sold exceptionally well. They are stocking in anticipation of a good fall business in all their lines.

=A handsome metal hanger has been issued by the advertising department of the New York Tire Co. The well-known painting "Samson" has been reproduced in ten colors from stone, the lithograph being transferred to a tin plate nicely backed with strawboard. It is particularly appropriate for advertising the company's "Samson" tires.

=There has been a change in the management of the druggists'-sundries department of the Mattson Rubber Co. (No. 241 Greenwich street, New York), J. Fred Doty retiring. The manufacture will be in charge of W. G. Brewer, who has had long experience in this line, having made and sold druggists' sundries under his own name in New York, and afterwards having charge for some years of the sundries department of the Cleveland Rubber Co. The sales will be directed by Henry W. Williams, who has been connected with the Mattson company since November, 1895, having previously been identified for fifteen years with the drug trade in New York city. The new management have excellent prospects for extending an already desirable trade, based upon the excellent reputation of the Mattson goods.

=Emmett A. Saunders has tendered his resignation as general manager of the United States Rubber Co., but no official action, it is understood, has yet been taken by the directors. Meanwhile Mr. Saunders has started for the west, on an extensive vacation. It is not improbable that Mr. Saunders, whose ability as a rubber superintendent is of a high order, and has been of great advantage to the company, may again be found, before many months, in an important connection with them.

"EQUAL TO THE BEST AMERICAN."

WHEREVER American manufactures have gone abroad their quality has made such an impression that they have become the standard. There may have been shipments of goods which failed to meet the tastes of foreigners, or were not adapted to their uses, or were too high-priced, but it has rarely happened that American manufactures have been condemned for a low standard of quality. The latest suggestion of this appears in the advertisements, in foreign newspapers, of the great wire-manufecturing concern of Felten & Guilleaume (Mülheim-on-Rhine,) in which these lines occur:

SPECIALTY, TROLLEY WIRE IN ALL SIZES,
EQUAL TO THE BEST AMERICAN MAKE.

One does not always see so candid a tribute to American standards in advertisements; it is oftener conveyed in the protestations of shopkeepers and in the less open method of counterfeiting American trademarks. There is another class of advertisements, by the way, now appearing in European journals, which one would scarcely look for in such mediums. Take, for instance, our London contemporary—the *India-Rubber and Gutta-Percha Trades Journal*. Not only does this line appear boldly in one of its advertising pages—

USE AMERICAN RUBBER MACHINERY

—an injunction which any one might get into almost any journal in the world by paying for it, but this more aggressive assertion also appears, on another page:

AMERICAN RUBBER MACHINE-MADE HOSE
IS BETTER AND CHEAPER THAN ENGLISH.

Certainly there is some point at which our transatlantic cousins will draw the line in the acceptance of advertisements, and we must assume that the organ of the British rubber trade would not admit to its columns such an assertion as that last quoted unless the proprietor were convinced of the truth of the assertion.

AT the recent Shoe and Leather Fair in London, in the exhibit of John Rye & Co., of Aldersgate street, says *The India-Rubber and Gutta-Percha Trades Journal*, "were shown samples of the various overshoes made by the American firms, and we must add that the style and finish is excellent. For the reason above stated [that "Englishmen have always been averse to using goloshes"] there has not been a big demand for overshoes in this country, but that has partly been accounted for by the clumsy appearance of the overshoes on the market. But the 'Woonsocket' and 'Rhode Island' and the Goodyear India-Rubber Glove Co.'s brands, for which Mr. John Rye is the English agent, are such a great advance in respect to style and appearance that the objection should now be overcome, and if our retailers would only take the trouble of showing these goods and explaining their uses to their customers we feel sure that a large trade might be done."

FR. PINKPANK, of Hildesheim, Germany, makes imitation slates, for school use. India-rubber is dissolved or softened in any of the usual reagents, and the mass mixed with zinc white, chalk, china clay, etc., and the requisite proportion of sulphur. The mass is then spread upon wood, sheet metal, paper, or leather, and vulcanized.

THERE have been some trifling changes in the 1897 pattern of the Dunlop bicycle-tire, as made in Europe. The rubber has been thickened a little on the tread, and the latest valve is similar to the 1894 pattern, but neater in appearance, and it requires a much smaller valve hole.

REVIEW OF THE INDIA-RUBBER MARKET.

AGAIN we have to report a comparatively quiet month in the crude rubber market. Consumption has been fair and even good by American manufacturers, and perhaps more active abroad. Rubber-shoe manufacturers have been buying here, in excess of their usual takings at this season. Prices are somewhat firmer, therefore, in New York and in Liverpool as well. The Pará crop-year ending on June 30 shows the increase in output which has been foreshadowed in our monthly returns.

Africans have arrived in America doing the past month in reduced volume, due in part to our increased demand for the better grades on the other side. Ever since the rise in Pará grades the European consumption of Africans has been on the increase, until prices of the latter have reached an unusually high figure. As a rule, the better grades predominate in the Africans imported here, so that an advance in these sorts is an important item in our rubber industry.

NEW YORK PRICES FOR PARÁ RUBBER IN JUNE.

	1897.	1896.	1895.
Upriver fine	84 @86	86 @89	75 @76
Upriver coarse	54½@56	56 @59	56 @57
Island fine	82 @83	80 @85	72 @74
Island coarse	45½@47	44 @48½	47½@50
Cameta coarse	58 @59	50 @52½	53 @55

In respect to the financial situation, Albert B. Beers, broker in India-rubber and commercial paper (No. 58 William street, New York), advises us as follows:

"The same general conditions have prevailed in the money market through June as reported for May, with a good demand for prime commercial paper, which has ruled in the rubber line at 4@5 per cent. for the best single and double names, and 5@6 per cent. for those considered not quite so strong. The prospects continue good for easy money through the summer.

The latest quotations in the New York market are:

PARÁ.		
Islands, fine, new	83	@
Islands, fine, old	84	@
Islands, coarse, new	46	@
Islands, coarse, old	none here	
Upriver, fine, new	85	@
Upriver, fine, old	88	@89
Upriver, coarse, new	56	@
Upriver, coarse, old	60	@
Caucho (Peruvian) sheet	42	@
Caucho (Peruvian) strip	none here	
Caucho (Peruvian) ball	50	@
CENTRALS.		
Esmeralda, sausage	52	@
Guayaquil, strip	43	@44
Nicaragua, scrap	50	@
Mangabeira, sheet	42	@
AFRICAN.		
Tongues	38½	@42
Sierra Leone	25	@52
Benguela	50	@51
Congo Ball	40	@42
Cameroon Ball	41	@42
Flake and Lumps	25	@27
Accra Flake	18	@20
Accra Buttons	53	@54
Accra Strips	56	@58
Lagos Buttons		@49
Lagos Strips		@51
Liberian Flake		@29
Madagascar, pinky	60	@
Madagascar, black	39	@42
EAST INDIAN.		
Assam	35	@65
Borneo	26	@42
GUTTA-PERCHA.		
Fine grade		1.35
Medium		1.20
Hard white		90
Lower sorts		50
Balata		

Late Pará cables quote:

	Per Kilo.		Per Kilo.
Islands, fine	8 $500	Upriver, fine	
Islands, coarse	4 $300	Upriver, coarse	

Exchange 7 9-16*d*.

No recent cables have been received for upriver sorts.

The statistical position of Pará rubber in New York and elsewhere is as follows, the figures expressing tons of 1000 kilograms:

	Fine and Medium.	Coarse.	Totals.	Totals. 1896.	Totals. 1895.
Stock, May 31	223	57 =	280	337	381
Arrivals, June	230	137 =	367	266	385
Aggregating	453	194 =	647	603	766
Deliveries, June	187	161 =	348	314	400
Stock, June 30	266	33 =	299	289	366

	1897.	1896.	1895.
Stock in England, June 30	1350	1065	1215
Deliveries in England, June	470	265	360
Pará receipts, June	1050	1030	780
Stock in Pará, June 30	120	95	220
World's supply, June 30 (excluding Caucho)	2246	1835	2260
Pará receipts since July 1	22,320	20,975	19,470

THE ANTWERP RUBBER MARKET.

TO THE EDITOR OF THE INDIA RUBBER WORLD: Nothwithstanding the somewhat weaker tendency of Parà sorts in the English market, the Antwerp market has remained firm for Congo sorts, especially for the medium to fine grades, and in most cases, brokers' estimations were topped by bidders. Since our last market report, dated May 21, sales have amounted to 131 tons, of which 15 tons were sold in the auction of May 29, 38 tons on June 2, 23 tons on June 8, and 55 tons on June 15. Among them we mention 12 tons Upper Congo Bussira balls, of which 2 tons sold at 6.47½ francs and 10 tons at 6.30 francs (estimation 6.45). Other sales were:

3½ tons Upper Congo balls at 5.95 (estimation 5.80).
4½ tons Congo Kassai balls at 5.37½ (estimation 5.25).
8 tons Congo Kassai strips at 5.55 (estimation 5.32½).
2 tons Congo red Kassai fine balls at 7.30 (estimation 7.22½).
18 tons Upper Congo Lopari balls at 6.97½ (estimation 6.75).
4 tons Upper Congo balls at 5.92½ (estimation 5.80).
14 tons Bussira balls, of which 3 tons at 6.77½ and 11 tons at 6.60 (estimation 6.70.)

The statistics of the Antwerp rubber market for the month of May are as follows, the figures expressing tons of 1000 kilos:

	1897.	1896.	1895.	1894.	1893.
Stock, April 30	145	40	98	20	20
Arrivals, May	115	72	29	11	3
Total	260	112	127	31	23
Sales, May	140	51	53	16	16
Stock, May 31	120	61	74	15	7
Arrived since Jan. 1	583	257	164	47	46
Sales since Jan. 1	601	285	172	41	43

Our actual stock is reduced to 15 tons. New arrivals, amounting to 165 tons are expected by the steamer *Albertville*, from the Congo, due at the end of this month.

C. SCHMID & CO.

Antwerp, June 21, 1897.

IMPORTS FROM PARA.

THE receipts of India-rubber direct from Pará and Manáos at the port of New York since our last publication are reported in detail below, the figures referring to pounds:

June 17.—By the steamer *Hildebrand*, from Manáos and Pará:

	Fine.	Medium.	Coarse.	Caucho.	Total.
Flint & Co	57,800	10,700	13,500	=	82,000
Lawrence Johnson & Co.	42,500	3,600	7,700	26,100=	79,900
Reimers & Meyer	17,500	3,900	16,600	=	38,000
Sears & Co	20,100	5,400	10,100	=	35,600
New York Commercial Co.	8,200	3,200	14,300	1,100=	26,800
Shipton Green	9,600	2,500	8,800	600=	21,500
Boston Rubber Shoe Co.			20,400	=	20,400
Joseph Banigan			13,500	=	13,500
Kunhardt & Co	7,000	4,600	200	=	11,800
Otto G. Mayer & Co.			9,600	=	9,600
George G. Cowl	3,200	1,100	1,900	=	6,200
G. Amsinck & Co	3,200	1,500	1,300	=	6,000
Gutta Percha and Rubber Mfg. Co	3,900			=	3,900
P. Lima	1,300		900	=	2,200
Total	174,300	36,500	118,800	27,800=	357,400

June 30.—By the steamer *Cearense*, from Pará:

New York Commercial Co	67,500	9,600	27,000	40,700=	144,800
Sears & Co	46,100	8,900	21,700	=	76,700
Boston Rubber Shoe Co.	31,100	5,700	10,700	14,700=	62,200
Reimers & Meyer	14,600	2,900	25,200	=	42,700
Flint & Co	14,600	1,400	2,200	=	18,200
Joseph Banigan			13,500	=	13,500
Otto G. Mayer & Co.			7,800	=	7,800
Lawrence Johnson & Co.			700	400=	1,100
Total	173,900	28,500	108,800	55,800=	367,000

	1897.	1896.	1895.
January Imports from Pará	1,393,500	2,718,300	2,869,500
February Imports	3,684,300	1,945,900	2,274,400
March Imports	2,436,600	2,786,300	3,611,700
April Imports	1,557,600	1,941,500	2,156,400
May Imports	1,683,900	1,527,800	1,651,400
June Imports	1,032,700	583,900	1,030,100

PARA IMPORTS VIA EUROPE.

June 14.—By the steamer *Tauric*, from Liverpool:
Sgal & Co. (coarse) 1,200

June 19.—By the steamer *Umbria*, from Liverpool:
Albert T. Morse (fine) 3,500

June 26.—By the steamer *Lucania*, from Liverpool:
William A. Brown & Co. (caucho) 6,500

OTHER NEW YORK ARRIVALS.

BELOW will be found in detail the imports at New York during June, 1897, of India-rubber from Mexico, Central America, and South America, other than Pará grades; also arrivals at New York of African and East Indian sorts:

CENTRALS.

	POUNDS.
JUNE 1.—By the *Allianca*=Colon:	
W. R. Grace & Co	7,860
Isaac Brandon & Bros	6,949
A. Santos & Co	2,653
Roldan & Van Sickle	1,830
Munoz & Espriella	1,854
Wallace Muller & Co	1,380
D. A. de Lima & Co	800
A. P. Strout	652
Dumarest & Co	475
H. Marquardt & Co	307
F. Probst & Co	214
Total	24,974
JUNE 2.—By the *Seneca*=Frontera:	
H. Marquardt & Co	3,500
JUNE 2.—By the *Hudson*=New Orleans:	
Albert T. Morse	12,000
JUNE 3.—By the *El Mar*=New Orleans:	
Albert T. Morse	4,500
JUNE 5.—By the *Athos*=Cartagena:	
Punderford & Co	3,000
Hoadley & Co	1,700
Ellinger Bros	1,800
Kunhardt & Co	1,000
For London	1,500
Total	9,000
JUNE 5.—By the *Etruria*=Liverpool:	
Wm. A Brown & Co	6,000
JUNE 7.—By the *Alleghany*=Greytown:	
G. Amsinck & Co	8,000
Andreas & Co	4,500
A. P. Strout	3,000
Munoz & Espriella	1,000
Total	16,500
JUNE 7.—By the *Carib*=Truxillo:	
Eggers & Heinlein	2,500
J. Agostini	1,500
H. W. Peabody & Co	700
Total	4,700
JUNE 9.—By the *Yucatan*=Mexico:	
Flint, Eddy & Co	2,500
H. Marquardt & Co	2,000
Thebaud Bros	1,000
J. Mendy	500
Eggers & Heinlein	500
Knoop Frerichs & Co	200
F. Probst & Co	300
J. W. Wilson & Co	300
Total	7,300
JUNE 10.—By the *El Paso*=New Orleans:	
Albert T. Morse	2,500
JUNE 11.—By the *Advance*=Colon:	
J. Agostini	3,828
H. Feltman & Co	3,000
N. Y. Commercial	2,100
Isaac Brandon & Bros	1,935
Samper & Jimenez	1,600

Eggers & Heinlein	1,257
Piza, Nephews & Co	607
Total	14,457

JUNE 14.—By the *Galileo*=Bahia:

N. Y. Commercial Co	3,500
Reimers & Meyer	4,000
Total	7,500

JUNE 14.—By the *Creole*=New Orleans:

Albert T. Morse	6,500
A. N. Rotholz	1,100
Total	7,600

JUNE 15.—By the *Alene*=Cartagena:

Kunhardt & Co	1,500
H. Feltman & Co	700
Dumarest & Co	300
Total	2,500

JUNE 16.—By the *Seguraca*=Mexico:

Suzorte & Whitney	1,000
E. Steiger & Co	1,000
Flint, Eddy & Co	700
Total	2,700

JUNE 21.—By the *Grenada*=Bolivar:

Kunhardt & Co	3,500

JUNE 21.—By the *Alliance*=Colon:

H. Feltman & Co	4,800
Flint, Eddy & Co	4,148
Munoz & Espriella	4,806
I. Brandon & Bros	3,479
R. F. Cornwell	2,019
Roldan & Van Sickle	1,980
J. Hecht & Son	1,740
J. Aparicio & Co	1,689
W. R. Grace & Co	1,170
Lanman & Kemp	814
A. P. Strout	615
Dumarest & Co	602
Kunhardt & Co	400
Andreas & Co	335
DeSoto, Hobo & Co	195
Total	28,783

JUNE 22.—By the *Hevelius*=Pernambuco:

Allerton D. Hitch	2,000

JUNE 26.—By the *Louisiana*=New Orleans:

Albert T. Morse	5,500
N. O. & C. A. Trading Co	2,500
Total	8,000

JUNE 28.—By the *Ardandhu*=Belize:

Eggers & Heinlein	700
K. Mandell & Co	300
Valentine Bros	300
For Glasgow	500
Total	1,800

JUNE 29.—By the *Adirondack*=Cartagena:

G. Amsinck & Co	2,000
D. A. De Lima & Co	2,000
Flint, Eddy & Co	1,500
A. N. Rotholz	1,000
Hoadley & Co	500
Total	7,000

JUNE 30—By the *City of Washington*=Mexico:

H. Marquardt & Co	500
E. Steiger & Co	600
E. N. Tibbals	500
Flint, Eddy & Co	200
Joseph Ware	200
Total	2,000

Total Centrals for June	178,813
Total for May	169,435
Total for April	242,605
Total for March	215,671
Total for February	163,558
Total for January	255,082

AFRICANS.

POUNDS.

JUNE 3.—By the *Servia*=Liverpool:

George A. Alden & Co	13,000
Otto G. Mayer & Co	5,500
Total	18,500

JUNE 3.—By the *Patria*=Hamburg:

George A. Alden & Co	25,800

JUNE 5.—By the *Etruria*=Liverpool:

Reimers & Meyer	6,600

JUNE 7.—By the *Bovic*=Liverpool:

Sgal & Co	16,600

JUNE 8.—By the *St. Cuthbert*=Antwerp:

George A. Alden & Co	21,000

JUNE 9.—By the *Teutonic*=Liverpool:

George A. Alden & Co	11,000

JUNE 12.—By the *Campania*=Liverpool:

Reimers & Meyer	11,700
William A. Brown & Co	11,000
Total	22,700

JUNE 14.—By the *Tauric*=Liverpool:

Sgal & Co	12,000

JUNE 19.—By the *British King*=Liverpool:

George A. Alden & Co	30,000
Sgal & Co	4,400
Total	34,400

JUNE 19.—By the *Umbria*=Liverpool:

Reimers & Meyer	19,500
Albert T. Morse	12,000
Total	31,500

JUNE 21.—By the *Andalusia*=Hamburg:

George A. Alden & Co	6,700
Reimers & Meyer	3,200
Total	9,900

JUNE 21.—By the *Peninsular*=Lisbon:

George A. Alden & Co	51,500
Sears & Co	51,000
Total	102,500

JUNE 21.—By the *Cevic*=Liverpool:

Sgal & Co	3,800

JUNE 22.—By the *Kensington*=Antwerp:

Albert T. Morse	45,000

JUNE 24.—By the *Majestic*=Liverpool:

George A. Alden & Co	21,000

JUNE 24.—By the *Palatia*=Hamburg:

George A. Alden & Co	13,500

JUNE 26.—By the *Lucania*=Liverpool:

George A. Alden & Co	13,000

JUNE 29.—By the *Nomadic*=Liverpool:

Sgal & Co	15,000

JUNE 30.—By the *Westernland*=Antwerp:

Sgal & Co	8,500

JUNE 30.—By the *Ultriken*=Hamburg:

Albert T. Morse	25,000

JUNE 30.—By the *Servia*=Liverpool:

Reimers & Meyer	3,000

Total Africans for June	460,300
Total for May	993,321
Total for April	892,700
Total for March	816,311
Total for February	737,700
Total for January	699,000

EAST INDIAN.

POUNDS.

JUNE 1.—By the *Macduff*=Singapore:

Reimers & Meyer	43,200

JUNE 8.—By the *Mohawk*=London:

Reimers & Meyer	31,800

JUNE 10.—By the *Persia*=Hamburg:

Windmuller & Roelker	10,400

JUNE 12.—By the *St. Paul*=Southampton:

George A. Alden & Co	4,500

JUNE 15.—By the *Mobile*=London:

Reimers & Meyer	18,400

JUNE 16.—By the *Goodwin*=Hamburg:

Albert T. Morse	11,500

JUNE 29.—By the *Manitoba*=London:

Reimers & Meyer	20,000
Wm. A. Brown & Co	11,000
Total	31,000

Total East Indian for June	150,900
Total for May	188,400
Total for April	86,500
Total for March	58,100
Total for February	80,600
Total for January	178,000

RECAPITULATION.

	POUNDS.
Pará—direct imports	1,032,700
Pará—via Europe	11,200
Centrals	178,813
Africans	460,300
East Indian	150,900
Total at New York for June	1,833,913
Total for May	3,141,556
Total for April	3,180,405
Total for March	3,563,557
Total for February	4,719,158
Total for January	2,068,182

BOSTON ARRIVALS.

POUNDS.

JUNE 7.—By the *Congo*=London:

George A. Alden & Co.—East Indian	16,000
George A. Alden & Co.—Africans	3,200
Total	19,200

JUNE 7.—By the *Pavonia*=Liverpool:

George A. Alden & Co.—East Indian	8,800
Sgal & Co.—East Indian	8,000
Sgal & Co.—Africans	5,000
Boston Rubber Shoe Co	34,200
Total	56,000

JUNE 10.—By the *Sachem*=Liverpool:

Reimers & Meyer (Caucho)	30,700

JUNE 16.—By the *Kansas*=Liverpool:

George A. Alden & Co.—East Indian	5,000
Sgal & Co.—East Indian	4,800
Total	9,800

Total at Boston for June	115,700
Total for May	223,823
Total for April	130,856
Total for March	141,162
Total for February	209,318
Total for January	227,245

NEW ORLEANS.

JUNE.

	POUNDS.	VALUE.
Nicaragua	29,802	$12,425

CUSTOM-HOUSE FIGURES.

PORT OF NEW YORK—MAY.

	POUNDS.	VALUE.
Imports:		
India-rubber	3,138,612	$1,656,671
Gutta-percha	28,643	5,137
Gutta-percha (Jooiatong)	57,183	645
Total	3,224,438	$1,662,453
Exports:		
India-rubber	35,302	$17,735
India-rubber scrap		10,108